Coping with dyslexia:
A transactional perspective

Submitted by Theodosia Thoma, to the University of Exeter as a thesis for the degree of
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This research was funded by a Bakalas Foundation studentship.
This thesis explores the phenomenon of coping with dyslexia based on the perspectives of six Greek dyslexic adults, as expressed by themselves. The research is concerned with exploration of the phenomenon by standing out from linear reductionist approaches - whether pathologising person-focused or exclusively environment-focused - as well as interactionist approaches that are simplistically additive. Instead, the study explores the phenomenon of coping with dyslexia from a transactional perspective which assumes that the factors of coping are strongly interrelated, mutually affected and altered by the transaction, suggesting a more complex and holistic understanding of the phenomenon. More specifically, the study considers the adequacy of Schlossberg’s transitional 4 S System in explaining the experiences of individuals who cope with dyslexia.

To pursue the purposes of the study, a multiple case studies design was employed and semi-structured interviews were conducted. Findings suggest that for the participants, coping with dyslexia is not restricted simply to dealing with a set of difficulties, because the dyslexia ‘situation’ is a complex entity with a variety of aspects which relate directly or indirectly to literacy efficiency. Participants reported employing a complex and constantly evolving (across contexts and over time) system of different coping strategies. In fact, findings suggest that coping with dyslexia is not a stable entity but a transactional process which is characterised by fluidity, non-linear evolution and involvement of multiple factors. The 4 S System managed as an analytic tool to adequately identify and explain the complex transactionist relationships between the involved factors and the system of coping as a whole. Finally, in terms of effectiveness, findings suggested that there are no magic recipes. The usefulness of a coping or support activity seems to be an individualistic issue determined by contemporariness and so, a flexible approach towards coping with dyslexia is suggested.
To my supervisors, Phil, Ruth and Hannah,

to my parents, Konstantinos and Evaggelia,

to my brother, Yannis

and to Giorgos

without whose endless support this thesis would not have been possible.
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This chapter aims to provide an introduction to the thesis by presenting the origins of my personal interest in the field of dyslexia and by providing the academic rationale upon which the idea for this study was developed. The chapter will also present the purposes of the study and will conclude with an outline of the thesis.

A. Personal introduction

“Why can’t Helen read and write although she is smart, she makes a great effort and she comes from a caring and encouraging family?” This question was asked about my best friend, Helen, with whom I shared the same desk throughout my school life. Helen has always been a beloved, lively and creative person with a true love for painting and art. As a student though, she seemed to have little aptitude for letters but an inclination to numbers. I remember this quite well, because it was frustrating to see her struggle to learn something that had been so easy for me, whilst at the same time she was always the first in class to solve mathematical problems. The discrepancy between her remarkably agile thinking in mathematics and her struggle with literacy tasks had puzzled her parents and teachers who sometimes talked about ‘natural tendency’ and other times about ‘laziness’ and ‘indifference’. I remember clearly mathematicians praising her performance as opposed to the philologists’ comments: “You need to try harder”; “Don’t daydream”; “Write 100 times the word ‘διάλειμμα’ in your notebook during the break and you’ll definitely learn the spelling”. But most of all I remember Helen trying to understand what was happening and seeking ways to cope with the school’s demands and the implications of not being able to read fluently and spell correctly in the mass literate school context. As we grew up the difficulty to follow the school’s expectations became greater, despite Helen’s efforts. My experience with

1 ‘Break’ in Greek
Helen has made me aware of the potential impact that literacy difficulties can have on academic attainment, emotional wellbeing and social status.

At the age of fifteen the mystery was solved; Helen was identified as dyslexic\(^2\). That was the first time I came across the terms ‘dyslexia’ and ‘dyslexic’ and although terminology did not improve my understanding much, I knew approximately what ‘dyslexia’ was due to my experiences with Helen. After diagnosis Helen received support on a one-on-one basis from a specialist dyslexia tutor and took oral exams at school. Although she improved in literacy, she never became a good speller or a highly accurate and fluent reader. However, she managed to achieve the grades to enter her first-choice university and graduated successfully. The process was not easy but architecture seemed to combine her two major strengths: mathematical thinking and drawing. Nowadays she is a happy and successful architect running her own company.

I started with this story because it marks the beginning of my interest in the field of dyslexia. My experience of Helen’s literacy difficulties was explained in university. The school of ‘Psychology, Philosophy and Education’ which I attended provided a wide range of interesting modules with regard to Greek Language, literacy, learning processes, teaching approaches and special educational needs (SEN). I found myself to be fascinated by these subjects, especially those that involved linguistics, literacy and learning difficulties, and so, after finishing my bachelor’s degree I decided to gain advanced knowledge in the field. I attended a Master’s degree in Education in SEN which came to be a complete revelation to me. For the first time I came across theoretical concepts such as ‘inclusive education’, ‘models of disability’, ‘philosophical paradigms’, ‘difference’ and ‘diversity’, which forced me to critically re-examine the understandings that I had held so far. Adopting a critical and reflective stance towards my beliefs was not an easy process, but it revealed to me that I had been brought up in a scientifically structured world and as an undergraduate student I had been exclusively educated according to positivistic disciplines. Up until my masters I had ignored alternative philosophical and educational perspectives such as social or postmodern understandings. Initially their existence came as a great shock; subsequently though, I

\(^2\) It is important to note that the terms ‘people with dyslexia’, ‘dyslexic people’ or ‘dyslexics’ may be construed as pathologising or stigmatising, which contradicts the ethical and methodological stances of this study about the role of participants. In some cases though, these terms are used either to reflect actual experiences and situations or for reasons of brevity. However, it is acknowledged that ‘adults with learning difficulties of a dyslexic nature’ are primarily individuals and respected for their uniqueness, as are all human beings.
saw it as a fascinating journey through alternative theories, notions and practices. With the encouragement of one of my supervisors, Phil Bayliss, I started posing questions about the dominance of bio-medical and cognitive approaches to dyslexia, the ‘virtue’ of literacy, the power of being an efficient reader and the disabling implications of the inability to master literacy in modernity. Gradually my interest moved away from genetic causation and linear generalised diagnosis-remediation practices for dyslexia as a disability, towards the possibility of the social construction of dyslexia and personalised learning processes that embrace dyslexia as a difference. In other words, I moved from ‘why can’t Helen read and write?’ in medical terms to ‘how can Helen cope in a non-dyslexic society?’ and ‘what could be done to help non-efficient readers and writers cope in a literate world?’. This type of questions operated as a trigger for the present PhD.

Two years after my masters and after having worked for a year as an SEN specialist tutor in a private institute, I gained a PhD scholarship which helped me fulfill my wish to understand thoroughly the phenomenon of coping with dyslexia. It had been particularly important to me to know how to help my students understand and accept themselves and cope with the literacy expectations placed upon them without feeling frustrated, tired and discouraged, as Helen had felt in certain cases. It is these kinds of issues that I will be exploring in this thesis, whose topic, research questions and processes were formulated after a long, complex but fascinating involvement with concepts, theories and ideas.

B. Rationale and purposes of the research

Literature has suggested that over the last decades the phenomenon of ‘learning difficulties’ has received increased attention by educationalists, researchers, policy makers and the media at all educational stages (Padeliadou, 2000), possibly because of the perception of literacy as a norm universally in modern societies (Riddick, 1996; Porpodas, 2002). The overemphasised theorising about the advantages of writing has made the inability to acquire literacy disabling (Pattanayak, 1991). Not surprisingly the ‘dyslexia world’ has been a popular area with an exponential rise in the number of books and articles referring to the phenomenon, which seems to concern up to 10% of the general population having dyslexia type difficulties (Peer, 1996; British Dyslexia
Association [BDA], 2010) and 4-5% of the population having severe difficulties (Frith, 1999; Miles and Miles, 1999). Although the prevalence varies due to different diagnostic measures (Schumacher et al., 2007) and different language structures, the incidence of dyslexia seems to vary between 1-11% across fourteen different countries (Smythe et al., 2004).

However, ‘the bulk of research reports and articles published over the past ten years with dyslexia as their main topic have dwelt upon two issues, causation and remediation’ (Burden, 2005, p.1) operating within what might be termed ‘the deficit-diagnosis-remediation model of dyslexia’ (Mortimore and Crozier, 2006, p.237). Although this model has led to the establishment of key theories (e.g. the phonological awareness theory, the magnocellular theory, the double deficit hypothesis), research conducted within this ‘medicalised’ discipline seems to give priority to dyslexia as a disability/disease (demanding diagnosis and treatment) whilst neglecting the human side of dyslexia (Burden, 2005) as expressed by dyslexic people themselves. It has not been until recently that the influence of social research and the disability rights movement has emphasised the importance of researching issues from the perspective of the individual and letting disabled people speaking for themselves (Riddick, 1996). However, the personal perspectives of those with disability is still a missing element in much of the research into different forms of disability and the field of dyslexia is no exception (Burden and Burdett, 2007).

The limited number of research projects that have acknowledged the importance of the human aspects of dyslexia have mainly been concerned with notions of self-esteem and self-concept (e.g. Humphrey 2001; 2002; Humphrey and Mullins 2002; Burden, 2005; Burden and Burdett, 2007). Although focusing on self, some of these projects have ignored the actual voice of the dyslexic individuals by employing inventories and measures (e.g. Thomson and Hartley, 1980; Riddick et al., 1999; Humphrey, 2002; Alexander-Passe, 2006). Self-esteem measures and subsequent statistical analysis have been challenged as inadequate and misleading, telling very little about the individual’s personal feelings (Burden, 2008). Regardless of the methodological debate about the use of inventories, research on the human aspects of dyslexia has mainly focused on emotional effects and implications at the self level and there is little comprehensive research on the human experience of coping with dyslexia. As will be explicitly presented in the literature review, the fields of dyslexia and coping theory have so far
rarely met, although knowledge about the individuals’ experience of coping with dyslexia seems to be a crucial aspect of the issue.

Moreover, although medicalised dyslexia research has focused on the discovery of a convincing etiology and effective treatment methods, none of the competing theories has managed so far to come up with a definite and universal ‘solution’ to the mystery of dyslexia. Neither have the rest of the dominant dyslexia models (both reductionist and interactionist), which will be explicitly presented in the literature review, managed to give firm and unchallenged answers. Dyslexia is still a debated area surrounded by controversy, complexity and confusion. Due to the nature of the problem, there is a disagreement about the definition, the etiology, the diagnostic criteria and the treatment methods (Mortimore and Crozier, 2006; Polychroni et al., 2009). At a commonsense everyday level dyslexia is defined as an unexpected difficulty in writing, reading and spelling, but as in many definitions the closer it is examined the more confusing it becomes to accurately define it (Riddick, 1996). The literature review reveals that there are a number of alternative definitions of dyslexia currently in use, but attempting to provide one accurate, reliable definition agreed upon by anyone seems impossible (Humphrey and Mullins, 2002; Tanos, 2009). Moreover, the term ‘dyslexia’ has been vaguely - and even arbitrarily - used as a catch-all phrase for a wide range of learning difficulties (Padeliadou, 2000). Many psychologists, teachers, parents and other interested parties have widely used the term dyslexia synonymously and interchangeably with ‘specific learning difficulties’ (SpLD) (Pumphrey and Reason, 1991; Thomson and Watkins, 1998). It has been also proposed that SpLD includes dyslexia as a type of specific difficulty; others are dyscalculia, attention deficit and hyperactivity disorder, dyspraxia, speech and language difficulties etc. (Pollock et al., 2004). Confusion in reference to the terminology seems to (inevitably) contribute to the elusiveness existing in the dyslexia world.

Furthermore, it seems important to highlight that although textbooks on dyslexia and published guidelines for students and adults with dyslexia come up with checklists of specific characteristics (e.g. McLoughlin et al., 1994; Gilroy and Miles, 1996; Chivers, 2001; Tanos, 2009), dyslexia does not consist of a unified set of symptoms (Polychroni et al., 2009) identifiable to all dyslexics. Dyslexics tend to share some common characteristics but the demonstrations of the difficulty differ among cases (Botsas, 2008). ‘Naturally, due to individual differences, experiences and variation of the
underlying causes, each child will not present in the same manner’ (Thomson and Watkins, 1998, p.9). If that is the case, it might be inappropriate (or even dangerous) to treat people with dyslexia as being homogenous. However, the vast majority of the research conducted in the field seems to neglect the factor of individuality and perceives dyslexics as a unified population with certain characteristics.

Additionally, it seems important to mention that dyslexia may be commonly perceived in terms of difficulties/disabilities, but as literature reports dyslexics may show significant skills in areas such as art, music, creativity and sports (West, 1997; Davis and Braun, 1997; Peer and Reid, 2003; Alexander-Passe, 2004; 2009). Although there are studies about dyslexics which report the persistence of underlying dyslexic-type difficulties into adulthood (Pennington et al., 1990; Paulesu et al., 1996; Frith, 1997), research also points out that dyslexic adults tend to compensate their difficulties and master literacy (Frith, 1997; Mortimore, 2008). As McLoughlin et al. (2002) claim there are so many adult dyslexics who have achieved success in their educational, working and personal lives that it must be accepted that dyslexia is not an insurmountable barrier.

Thus, since traditional approaches to dyslexia that start research from the premises of ‘homogeneity’ and ‘disabling difficulties’ have not managed to resolve the dyslexia enigma, it may be time to stand out of dominant deficit-diagnosis-remediation model of research (Herrington and Hunter-Carsch, 2001), and try different research approaches. The present study adopts an alternative perspective that gives priority to the uniqueness of the case by listening to dyslexics reporting how dyslexia is demonstrated in their lives, without presuming the type of their ‘difficulties’ beforehand. The acknowledgment of the heterogeneity of dyslexia characteristics in different individuals as well as the differences in personal appraisals has led the present study to avoid any symptomatological presumptions and this is partly the reason the literature review does not include a section about dyslexia difficulties. After all, it is not the intention of this study to assess or diagnose the nature of the difficulties of those identified as dyslexics, but to give priority to their personal perspective and to listen to them talking about ‘their dyslexia’ and their coping efforts as experienced by them in their everyday lives in a literate world. As Riddick (1996) mentions, personal perceptions of difficulties may not reflect accurately their actual difficulties but given the significance of factors such as
self-efficacy and self-concept, it seems important to investigate difficulties as perceived by the individuals.

Moreover, the avoidance of presuppositions about the ‘symptomatology’ suggests the adoption of a non-disabling and non-stigmatising standpoint which does not take for granted that dyslexia is a problem having solely negative implications and does not exclude the possibility of having a positive effect - at least in some aspects of life - or having no implications at all. Riddick (1996) has reported that when mothers of children with dyslexia were asked about the influence - if any - dyslexia had had on their child, the following percentile answers were obtained: none 5%, some 40% and a lot 55%. If that is the case the question that emerges is why for 5% of the dyslexic participants dyslexia was not an issue. What is happening or what do these children do that eliminates the impact of dyslexia? Or to put it simply, how do they cope?

It is the intention of this study to explore in-depth, holistically and in its full complexity and detail the phenomenon of coping with dyslexia based on the unique meanings that dyslexic individuals attribute to their experience of coping with dyslexia. It is important to highlight that the review of the literature suggests that research on coping with dyslexia is limited both within the international and the Greek context. So far, only a handful of studies have explored the phenomenon and many of these can receive criticism on the basis of being non-systematic, methodologically and ethically challenging and theoretically non-justified. Due to the limited research, it is not perhaps surprising that most of these early attempts seem to follow traditional within-person perspectives which conceptualise dyslexia as a ‘problem’ that demands ‘coping’ activities to minimise ‘suffering’, in terms of literacy difficulties or subsequent stress. This of course does not deny the significance and the contribution of these projects to the field. However, it is reckoned that the field would benefit from research conducted under a non-disabling and individualistic perspective.

Thus, the main goal of this research is to contribute to the study of this relatively unexplored aspect of the field by exploring thoroughly and holistically the phenomenon of coping with dyslexia within a new context; that is Greek literate society. More specifically, the aim of the study is to explore how dyslexic adults experience their dyslexia and what coping strategies they employ across the lifespan and in response to every day needs and expectations placed upon them by a literate society. Although,
literacy-related environments (e.g. school and university) may be expected to have increased correlation to dyslexia, the study explores dyslexia and coping strategies in all possible contexts (e.g. work, university, home, leisure activities) in which adults with dyslexia participate because dyslexia-type demonstrations seem to exceed literacy (Mortimore, 2003; 2008). Moreover, the intention of the study is to identify the key factors - both personal and environmental - that play a role in coping and to explore how these relate to the choice of coping mode.

To pursue the intentions of the study, a well-theorised framework from the coping discipline is employed after an intensive review and a discussion of the existing theories and the literature in the field. The transitional 4 S system (Schlossberg et al., 1995), which has never been employed in relation to dyslexia before, is chosen as a theoretical framework on the basis of conceptualising dyslexia as an ‘event’ or a ‘situation’ and not necessarily a ‘problem’. The 4 S system seems to provide a holistic perception of coping as a complex phenomenon, as opposed to simplistic approaches that view coping strategies as equivalent to coping. However, it should be noted that although the 4 S system operates as a theoretical guide, it is not blindly followed; rather, its adequacy as an analytic tool for describing and explaining the individuals’ experience of coping with dyslexia is tested by the present study which employs an inductive data analysis for the interviews of the six adult participants. Finally the 4 S system is preferred because of its originality and its potential innovative contribution to the field of dyslexia. It belongs to transactional approaches of coping which have never been met in the conceptualisation of dyslexia. As will be presented in the literature review, although the disciplines of coping and dyslexia examine different 'problems', they seem to follow similar evolitional paths. They both started from reductionist approaches (in-person and later environmental understandings) followed by interactionist perspectives. However, coping theory has evolved even further to a transactional perspective whilst dyslexia has ‘stuck’ in reductionist and interactionist approaches. Therefore, it is intriguing to examine whether the dyslexia discipline would benefit from an alternative conceptualisation based on the tenets of transactional theory. The exploration of such an interesting and promising possibility has never been attempted before and was among the major aims of the present study, the structure of which is presented below.

C. Outline of the thesis

The thesis consists of seven chapters. The present chapter provides a prologue to this research project, including a personal introduction, the theoretical rationale of the research, the ‘gap’ of knowledge in the discipline and the aims of the study.

Chapter 2 provides a review of the literature in the field of coping with dyslexia and it is divided into four main sections. The first section explores in-depth the notion of dyslexia. The second section examines the notion of coping. The third section presents a review of the research completed so far in the field of coping with dyslexia. The chapter closes with a presentation of the research questions as these emerged from the discussion of the theory and the research conducted in the field.

Chapter 3 presents analytically the philosophical underpinnings of the present study and clarifies the methodological procedures and technicalities which were employed so as to explore the research questions. More specifically, chapter 3 discusses the choice of a methodology of multiple case-studies and individual semi-structured interviews as the most appropriate approaches to pursue the purposes of the study. Chapter 3 also presents the methods and the process of data analysis and involves a discussion about the quality of the study and the issues of validity, reliability and generalizability. Finally, this chapter demonstrates how this methodology was based on a coalition of complexity theory and interpretive theoretical perspectives that draw upon constructionist epistemological assumptions and explains how constructionism is associated with a relativist ontology.

Chapter 4 provides a description of the ethical actions undertaken by the study to protect the participants’ well-being and integrity. The chapter suggests that the ethical choices were resulted from a meta-ethical discussion of the underlying conflicts of moral norms and values.

Chapter 5 provides a detailed presentation of the findings of data analysis and is divided in four subchapters. Each subchapter presents a major theme that was involved in the process of coping with dyslexia. Subchapter A refers to the factor of ‘self’, subchapter B presents the ‘dyslexia situation’ factor, subchapter C provides an in-depth analysis of the factor of ‘support’ and finally subchapter D presents the factor of ‘coping...
strategies’. The subchapters include descriptive presentations of the findings using quotes from the participants’ interviews as well as critical discussions of the outcomes.

Although some discussion of the findings is integrated in chapter 5, chapter 6 provides a comprehensive and detailed discussion of the most significant aspects of the findings as responses to the research questions and focuses on the synthesis of these elements into an integrated whole. It also addresses the implications of the findings for educational and professional theory and practice. Finally, it examines the relationship between the findings of the present study and the existing literature.

The final chapter draws together and summarises all the significant findings of the study. It makes reference to the unique contributions of the study to the field and also reflects on the limitations of the project recommending areas for future research.
CHAPTER 2: UNDERSTANDING DYSLEXIA AND COPING

This chapter provides a review of the literature in the field of coping with dyslexia. Initially an in-depth exploration of the notion of dyslexia and a critical discussion of the work conducted within the three dominant models (the medical, the social and the bio-psycho-social models) is provided. Then the chapter explores the notion of coping as this has been conceptualised by the major disciplines in the field: in-person trait-oriented approaches, situation-oriented process-based approaches, interactionist approaches and transactional approaches. Subsequently, a review of the research projects completed so far in the field of coping and dyslexia is provided stressing that transactional approaches in relation to coping with dyslexia have not been attempted. The chapter closes with a presentation of the research questions of the study as these were formulated through the discussion of the existing theories and researches in the field.

At this point it seems important to mention that a section on dyslexia ‘difficulties’ was intentionally not included in the literature. As it was briefly mentioned in the previous chapter, such a decision is in line with the study’s non-disabling and non-stigmatising standpoint. The intention of the study is to give priority to the particularities of the individual case and the participant’s voice. Therefore, any reference to a specific set of characteristics - similar to those mentioned in literature - that may give the impression of facing the participants as a homogenous group of certain ‘difficulties’ or ‘dysfunctions’, is important to be avoided.
A. Understandings of dyslexia

Towards an agreed-upon definition?

Starting the exploration of a phenomenon by providing a definition seems logical, but this is not the case for dyslexia because the notion is still surrounded by controversy and confusion both in research and in practice (Reid, 1998), although it has received considerable attention from researchers, teachers, parents and even the media (ibid.). Some of the debates concern the notion of dyslexia as an identifiable entity, its precise nature and the causation descriptions and explanations (Stanovich, 1996). The term ‘dyslexia’ was first referenced by a neurologist, Berlin (1872), who followed the medical custom of the era using Greek etymology: ‘dys’ meaning difficulty and ‘lexis’ meaning the written word. Simply put, the term means ‘difficulty with words’ (BDA, 1999 in Rice and Brooks, 2004) and refers to difficulties with reading or decoding the written word (Thomson and Watkins, 1998). Nowadays, although an increasing number of people from different backgrounds and contexts tend to use the term and talk about ‘dyslexia’ or describe children as ‘dyslexic’, it cannot be assumed that they refer to exactly the same concept or that they share the same understanding about dyslexia (Paradice, 2001). Even though it is commonly used, the term ‘dyslexia’ is an example of a word which still remains poorly defined (ibid.).

‘There are many published definitions of dyslexia’ (Rose, 2009, p.29). The variety of proposed definitions possibly reflects the wide range of theories that have attempted to explain dyslexia (Hartas, 2006) and also the fact that different types of definitions have emerged to serve different aims and functions (e.g. allocation, explanation, understanding, research, statement definitions) (Reid, 2009). The majority though, of the accepted definitions utilise within-child concepts (Poole, 2003) following traditional scientific understandings that see dyslexia as a medical disorder, a deficit or a problem in some way (Riddick, 2010). In fact, the concept of dyslexia was initially used exclusively by the medical profession, which perceived it as a neurological deficit (Thomson and Watkins, 1998). Although with the passage of time the dyslexia enquiry moved away from neurological perspectives into more educational and socio-cultural understandings (ibid.), the ‘in-person’ weakness paradigm seems to be dominant (Herrington and Hunter-Carsch, 2001) and as such, deficit and discrepancy definitions
are a live issue (Pollak, 2005). Deficit definitions highlight limitations and inadequacies while omitting any positive characteristics (Mortimore, 2008). A definition within this framework of conceptualisation of dyslexia comes from the World Federation of Neurology (WFN) and is still quoted today:

‘Dyslexia is a disorder manifested by difficulty in learning to read, despite conventional instruction, adequate intelligence and socio-cultural opportunity. It is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin.’ (WFN, 1968, p.21)

Apart from focusing exclusively on deficits, this definition - beside other medical definitions - is formalised under the notion of exclusion and discrepancy. Discrepancy definitions identify and explain dyslexia in terms of a gap between measures of intelligence and literacy achievement (Reason and Frederickson, 1996). However, they have been characterised as problematic because they do not differentiate between dyslexic and a wide variety of poor readers (Stanovich, 1996). In 1999, the controversies in relation to definitions urged the British Psychological Society (BPS) to develop a working definition for dyslexia without necessarily including causal explanations. The definition was as follows:

‘Dyslexia is evident when accurate and fluent word-reading and/or spelling develops very incompletely or with great difficulty. This focuses on literacy learning at the “word level” and implies that the problem is severe and persistent despite appropriate learning opportunities.’ (BPS, 1999, p.18)

Although the BPS report has been perceived as progress in the field clarifying past misconception about the word dyslexia (Woods, 2002) the definition has been criticised on the basis of ignoring the fact that dyslexic patterns of learning surpass difficulties with literacy (Mortimore, 2003; 2008). In fact, among the numerous definitions that have appeared, the majority seems to conceptualise dyslexia in relation to reading, writing and spelling as central areas of weakness. However, this may be too narrow and possibly engender false beliefs about dyslexia (ibid.). The BPS definition seems to overlook the existence of literate adults with dyslexia who continue to experience dyslexic demonstrations but possibly in domains other than literacy (Frith, 1997; McLoughlin, 2004). Dyslexic demonstrations in reading and writing may be more
evident in childhood because adults may, after long years of effort, master literacy. Nevertheless, focusing solely on literacy as a criterion for dyslexia gives the impression that once reading difficulties are overcome, dyslexia is ‘cured’ and that the individual ceases to have dyslexia (McLoughlin et al., 2004; Mortimore, 2008). Dyslexia, though, is not a condition that goes away after school (Frith, 2002). Rather, dyslexic adults seem to handle their literacy difficulties as a result of successful coping strategies gained through lifelong experiences.

Since dyslexia seems not to be restricted to reading and writing difficulties, Miles (1993) suggested the concept of dyslexia as a syndrome with a variety of symptoms (e.g. short-memory problems, right/left confusion). In this sense, literacy difficulties are just part of the wider disability which demonstrates itself whenever symbolic material has to be distinguished and named. Such descriptive definitions attempt to pass over the weakness of considering dyslexia solely in relation to literacy by providing descriptive explanations of the variety of characteristics that people with dyslexia may demonstrate. However, they tend to operate within the traditional ‘within person’ deficit model which has a scientific basis and attributes dyslexia to biological/neurological and cognitive factors. Even the latest working BDA definition adopted by Sir Jim Rose’s report (2009) seems to make solely a short reference to possible abilities and strengths of dyslexics while stressing bio-cognitive deficiencies (see Appendix 1). Explicit presentation of such medicalised approaches will be made in the following section.

**Medical and individual deficit model**

Initial attempts to explain dyslexia lay within medical neurobiological approaches (Riddick, 1996; Thomson and Watkins, 1998; Michail, 2010) which are based on the assumption that dyslexia is a condition with a genetic origin and a basis in the brain (Frith, 2002). ‘The medical model views disability as a feature of the person, directly caused by disease, trauma or other health condition, which requires medical care provided in the form of individual treatment by professionals. Disability, in this model, calls for medical or other treatment or intervention, to “correct” the problem with the individual’ (World Health Organisation [WHO], 2002, p.8). Therefore, according to medical model approaches, dyslexia is a within-person condition with an organic (possibly inherited) impairment basis which demands early intervention by
professionals to correct or lessen the deficit (Riddick, 2001). Medical approaches seem to be preoccupied with the exploration of neurobiological and cognitive causes.

**Genetic and neurobiological approaches**

Advances in genetic research have contributed to the exploration of the origins of dyslexia. Early research in reading suggested that dyslexia was familial (Bates, 2006) and there have been considerable efforts to identify the heritability of dyslexia (e.g. Olson et al., 1994; Castles et al., 1999). Stein (2008) claimed that heredity is the most important factor in dyslexia. ‘The proportion of inherited factors involved in the development of dyslexia is between 40% and 80%’ (Schumacher et al., 2007, p.289). Research on families suggested that 40-60% of children with a dyslexic parent are likely to develop reading difficulties too (ibid.). Male children of a dyslexic parent or sibling have a 50% chance of being dyslexic (Pennington et al., 1991 in Nicolson and Fawcett, 2008a), sons of mothers who are poor readers seem to have a 35% risk and daughters of mothers or fathers who are poor readers seem to have a risk of 18% (Vogler et al., 1985). Research with twins also suggested a genetic basis for dyslexia. De Fries (1991) claimed that concordance for reading problems in identical twins was 70% whilst for non-identical twins it was 43%.

Gene markers for dyslexia have been identified through molecular genetic linkage studies in nine chromosome regions with the most consistent chromosomes being 1p34–p36, 6p21–p22, 15q21 and 18q11 (Schumacher et al., 2007). However, according to Nicolson and Fawcett (2008a) the assumption of a single gene being responsible for dyslexia and the perception of dyslexia as a genetically predetermined and so inevitable condition, are false and disastrous. The brain development does not rely exclusively on a genetic endowment; rather it stems from the complex and unpredictable interactions between the genes and environment (ibid.). This does not imply that genetic research is without value. However, further work is required.

Attempts to associate dyslexia with certain parts of the brain were central in the work of Galaburda and his colleagues who examined dyslexic brains and suggested structural brain differences between dyslexics and non-dyslexics, with dyslexics having an absence of the typical left-right hemisphere asymmetry or demonstrating reversed asymmetry (the right hemisphere was larger than the left) (Galaburda et al., 1985; 1989;
Humphreys et al., 1990). The right hemisphere preference places them at a disadvantage in ‘language specialist’ left-hemisphere tasks, such as reading and accuracy (Peer and Reid, 2003). Larsen et al. (1990) claimed that the atypical symmetry is directly associated with phonological ceding deficit. Leppanen et al. (1999) supported these findings by reporting different patterns of brain activity between dyslexics and their control group. Moreover, Galaburda et al. (1985) provided evidence of microscopic anomalies in the cerebral cortex - outgrowths of neurones that disobey stop signs and migrate beyond the exterior limiting membrane during development - called ‘ectopias’. However Galaburda’s work has received criticism in terms of generalisation due to the limited number of ‘specimens’ (Nicolson and Fawcett, 2008a). Moreover, there are doubts whether the specimens were actually (typical) examples of dyslexia (ibid.) Finally, differences in structure have been found but the interpretation is not straightforward. In other words, it is questionable if such cortex differences constitute actual lesions or just different brain structures.

Bakker (1998) proposed the ‘balance model’ of reading which identifies two different types of readers, ‘perceptual’ (P-type) and ‘linguistic’ (L-type), each with different hemispheric preference. The ‘perceptual’ readers seem to have a right hemisphere processing style, which means accurate reading and good comprehension but slow and fragmented reading. ‘Linguistic’ readers rely on left hemisphere, read fast but they make many errors and show poor comprehension. Bakker et al. (1981) proposed that stimulating right-hemispheric processes in L-type dyslexics and left-hemisphere processes in P-type dyslexics might modify hemispheric involvement in reading and improve reading performance. However, Dryer’s et al. (1999) study which tested the validity of Bakker’s theory and treatment propositions, did not confirm the differential effectiveness of the treatment programmes, proposing serious implications for the internal validity of the ‘balance’ model.

Dyslexia has also been related to visual factors (Everatt, 2002). Stein (2008) claimed that a significant discovery in the field of dyslexia over the last 25 years is that visual information is not analysed in series but simultaneously by separate, parallel pathways. There are two kinds of retinal ganglion cells: magnocells are noticeably large cells and cover a 50 times greater area than the numerous but markedly smaller parvocells. Parvocells deal with relatively static information and details whilst magnocells detect rapid transitions in the incoming information. Stein and Walsh (1997) proposed a causal
link between sensory defect in magnocells and dyslexia. Due to an impaired magnocellular system dyslexics have reduced sensitivity to motion stimuli (Stein, 2001) which is essential in reading. He also suggested that the two pathways operate in cooperation with all sensory information and so, visual, auditory and motor symptoms in dyslexics may arise from the different magnocellular systems. In this sense, Stein’s magnocellular theory attempted to unite phonological, visual and kinesthetic dyslexia theories (Riddick, 2010). However, this is a relatively new theory with mixed findings and so more research is required (ibid.).

The cerebellar deficit hypothesis also ‘had the potential to offer a unifying causal framework for dyslexic difficulties in that cerebellar deficits can be implicated in phonological processing, central processing speed, motor skills, automatisation difficulties, some or all of which can be evident in a dyslexic profile’ (Mortimore, 2008, p.54). The cerebellum is a subcortical brain structure at the back of the brain. The two cerebellar hemispheres receive massive inputs from all senses and different regions of the cerebellum are related with different skills (Nicolson and Fawcett, 2008b). Cerebellum is involved in the control of rapid skilled independent limb movement, the somatosensory information about the position and the movement rate of the limbs and it is also a central structure for cognitive language dexterity and is critical for the automatisation of any skill, whether motor or cognitive (Nicolson and Fawcett, 2008a; 2008b). Moreover, it is involved in verbal working memory, memory retrieval, sequence learning, trajectory learning and classical conditioning. Since the cerebellum is associated with both verbal and motor cognitive skills, it provides a coherent explanation of the three major dyslexia theories: the phonological deficit, the double deficit and the automatisation deficit (ibid.). ‘Damage to different parts of the cerebellum can lead to a variety of different symptoms’ (ibid., 2008b, p.79). Regarding dyslexia, cerebellar impairment is likely to mildly affect motor and articulatory skills, which in turn provoke improvised representation of the speech phonology and so, reading difficulties (ibid.). Weak motor control seems to reflect on handwriting (ibid.). Hence, dyslexia is attributed to impaired cerebellar function, possibly from birth. Although the cerebellum is among the first brain structures to differentiate, it is one of the last to mature (Nicolson and Fawcett, 2008b) and is susceptible to injury in the case of premature birth, which can provoke a variety of motor, language and cognitive issues (Limperopoulos et al., 2007; Steinlin, 2007 in Nicolson and Fawcett, 2008b).
Another of the hypothesised functions of the cerebellum is precise procedural timing, which may be critical in the automatic accomplishment of certain tasks. Automatic accomplishment refers to well-established acquired skills which are carried out without paying too much attention (e.g. walking) and so cognitive resources can be used for other tasks which are undertaken at the same time. Like other skills, reading is also subject to automaticity. Research has suggested that dyslexics’ reading difficulties could stem from their difficulty in automatising this skill (Nicolson and Fawcett, 2008a). However, automaticity is primarily a cognitive skill, and so it will be further discussed in the cognitive approaches subchapter.

Despite the improvement in cerebellum research, the hypothesis is still controversial (Fawcett and Nicolson, 2008b; Mortimore, 2008). Some of the criticisms have focused on the inability to define which region of the large cerebellum structure is affected and whether the cerebellum is actually responsible for dyslexia, due to its close conjunction with other brain functions.

These tend to be the most significant neurobiological theories. However, the controversy in relation to the cause of dyslexia suggests that either further research is required within the discipline or alternative disciplines may need to be considered.

**Cognitive approaches**

Theories within the cognitive approaches are preoccupied with the processes and the conceptual structures of reading and writing. However, it seems important to mention that there is often an overlap between neurobiological and cognitive approaches because cognitive research considers neurobiological perspectives, and vice versa (Everatt and Reid, 2009). Perhaps the case of the cerebellum hypothesis is an example of such an overlap because it can be seen both as a particular brain region deficit and an aspect of cognitive processing (e.g. automatisation). Moreover, neurobiological abnormalities could be seen as the basis for cognitive dysfunctions, meaning problems regarding the information-processing mechanisms (Frith, 2002). In other words, cognitive theories seem to primarily focus on the description of processes that lie between the brain and the behaviour (Nicolson and Fawcett, 2008a).
A critical factor that lies behind fluent reading is the ability to automatically and effortlessly recognise letters and spelling patterns (Adams, 1990). However, dyslexics - even those who have managed to acquire literacy more efficiently - show slow, effortful and less-automatic reading (Nicolson and Fawcett, 2008a). These observations forced Nicolson and Fawcett (1990) to propose the dyslexic automatisation deficit hypothesis which argues that dyslexics have difficulty in making skills (both cognitive and motor) automatic, regardless of extensive practice. Therefore, dyslexics require additional time and over-learning to achieve automaticity (Reid, 2009). The automatisation hypothesis was supported by a series of studies in the early 1990s which asked dyslexic children to do two things simultaneously. These studies suggested that dyslexic children showed severe deficiencies in a variety of skills such as balance, motor skills, phonological skills and rapid processing, which obliged them to concentrate more to achieve normal levels of performance (Nicolson and Fawcett, 1990; 2008a).

Metacognition - which essentially means awareness about thinking and learning - has also been considered in relation to dyslexia. Research has suggested that metacognition skills do not develop spontaneously in dyslexics (Tunmer and Chapman, 1996) possibly due to difficulties in automaticity (Mortimore, 2008) or repeated failure which undermines their motivation to develop strategic control of their learning (Ridsdale, 2004 in Mortimore, 2008). In practice this means that dyslexics select inefficient reading strategies and have difficulties in unlearning such strategies if these have been utilised for a long time (e.g. they misspell a word even if correct spelling has been taught) (Tunmer and Chapman, 1996). Moreover, in information-processing tasks dyslexics seem to have difficulty in identifying the task demands and selecting the most appropriate strategy because of information overload (Leather and McLoughlin, 2001 in Reid, 2009). Although such misdirections can lead to creative problem-solving (West, 1997), the theory emphasises the role of early strategic learning (Reid, 2009). However, there is disagreement over whether these strategies can be actually taught (Mortimore, 2008).

The phonological deficit hypothesis has been the predominant theory in the explanation of dyslexia (Everatt and Reid, 2009; Riddick, 2010). The phonological processing system is concerned with the perception, coding and production of speech sounds and it is highly relevant for reading and writing acquisition (Hatcher and Snowling, 2002). ‘This theory recognises that speech is natural and inherent, while reading is acquired
and must be taught’ (Shaywitz and Shaywitz, 2005, p.1301). More specifically, learning to read in an alphabetic system involves learning to associate letters of printed words with their sounds, while learning to spell entails pulling the sounds of spoken words apart and associating them with the corresponding letters or spelling patterns (Hatcher and Snowling, 2002). The phonological deficit theory argues that dyslexic children demonstrate difficulties in decoding single words which in turn provokes problems in spelling and reading accuracy and fluency (Riddick, 2010). Consistent research findings suggest that children with dyslexia have limitations in verbal short-term memory (e.g. to follow instructions, memorise lists and learn dictation) and difficulties in accessing phonological information from long-term memory (e.g. memorising days of the week, multiplication tables or learn foreign languages) (Hatcher and Snowling, 2002). However, most noticeable seem to be the difficulties in phonological awareness, the ability to identify, manipulate and associate units of sounds with the appropriate signs/letters (Bradley and Bryant, 1983; Frith et al., 1998; Snowling, 1998). Since the alphabetic writing system is considered to be phonological, children who displayed good phonological awareness prior to learning to read, usually learn reading easily (Riddick, 2010) whilst children who have difficulties in distinguishing words verbally are expected to have problem in learning the alphabetic principle (Everatt and Reid, 2009). According to Nicolson and Fawcett (2008a) multiple studies have consistently suggested that dyslexics have poor phonological skills and that they can benefit from phonological awareness training. Interestingly, the phonological difficulties associated with dyslexia are not universal but rather they tend to vary across languages, since languages differ in the degree and the way they represent phonology in their orthography (Hatcher and Snowling, 2002; Everatt and Reid, 2009). Transparent orthographies seem to encourage faster development of word recognition and non-word decoding suggesting that ‘dyslexia as a word-level literacy learning difficulty may be less evident in languages that use a relatively simple relationship between letters and sounds’ (Everatt and Reid, 2009, p.7).

According to Hatcher and Snowling (2002) the reason for phonological difficulties is the less-detailed and poorly specified phonological representation. A more specific hypothesis is that dyslexics make coarse-grained coding between a word pronunciation and its letter representation (e.g. chunks instead of grapheme-phoneme correspondence) which result in a difficulty to generalise phonological knowledge when meeting a new word. Frith (2002, p.56) suggests that ‘the brain basis of the phonological deficit is
thought to lie in the peri- and extra-sylvian areas of the left hemisphere of the brain’ which demonstrate subtle abnormalities in the form of cell migration in certain layers of the cortex. According to Frith (2002) a number of brain-imaging studies have revealed atypical neural activity in the left hemisphere language system during phonological tasks with adults with dyslexia. However since none of the studies has shown actual brains lesions in dyslexics, a disconnection between the various and distributed systems which are involved in speech processing is hypothesised (Paulesu et al., 1996; 2001; Brunswick et al., 1999 in Frith, 2002).

Although phonological theory has been perceived as a significant theory because of its considerable influence on educational practice (Riddick, 2010), Nicolson and Fawcett (2008a) claimed that new findings in visual and auditory information have challenged the assumption that phonological deficit is the only cause of dyslexia. Rather it should be better seen as a piece in the jigsaw puzzle (ibid.). Moreover, although phonological deficit is linked to dyslexia, phonological difficulties may stem from a variety of causes (ibid.). Finally, it is estimated that only 80% of potentially dyslexic children demonstrate phonological difficulties and therefore it is questionable what happens with the 20% who are dyslexic but do not face any phonological issues (Frith, 2002).

Disappointing results from phonological remediation programmes in the United States (Torgesen, 2001 in Nicolson and Fawcett, 2008a) and the existence of a group of dyslexics who demonstrate adequate coding skills but poor fluency and comprehension have reinforced the emergence of the double-deficit hypothesis (Vukovic and Siengel, 2006). Wolf and Bowers (1999, p.416) proposed an alternative integrative conceptualisation of developmental dyslexia, ‘that phonological deficits and the processes underlying naming speed are separable sources of reading dysfunction, and their combined presence leads to profound reading impairment’. The double-deficit hypothesis suggests three subtypes of reading difficulties: the phonological-deficit subtype, the naming speed-deficit subtype and the double-deficit subtype which combines the two other subtypes constituting the most severe reading impairment. Readers with exclusively phonological difficulties have moderate reading deficit whist readers with naming speed difficulties have the least reading impairment (Wolf and Bowers, 1999). It has been suggested that slow naming speed is related to difficulties in recognising words quickly (ibid.) and that naming speed provides an approximation of reading process (WoLF et al., 2000) implying that a rapid naming test could predict
reading difficulties (Vuckovic and Siengel, 2006). However, the lack of an agreed-upon definition of the role of rapid naming has made challenging the efficiency of diagnostic tools and intervention programmes. Although the double-deficit hypothesis has been very influential on research into reading treatment (Nicolson and Fawcett, 2008a) further research is required to clarify the role of rapid naming in the field of dyslexia (Vuckovic and Siengel, 2006).

Other research within the cognitive approach proposed the triple deficit hypothesis (Badian, 1997) according to which orthographic factors (e.g. letter sequencing and spatial position patterns) involving visual skills should also be considered alongside phonological and naming-speed skills. ‘If it is accepted that orthographic processing contributes to reading acquisition, the possibility arises that in some cases impaired reading may be associated with a triple deficit in phonological awareness, naming speed, and orthographic processing, rather than just with a double deficit’ (ibid., p.3). Findings suggested that the association of more impaired reading with a triple deficit was striking (ibid.).

Besides visual skills, research has also proposed links between dyslexia and deficits in auditory processing (Tallal, 1980; Johanson, 1997). Moreover, motor factors seem to be involved in dyslexia (Stein, 2008) and, more obviously, dyspraxia.

Biological and cognitive explanations of dyslexia lie within medical understandings and scientific/positivist research approaches. A positivist paradigm supports the existence of an external truth that can be measured objectively (Marsh and Furlong, 2002) and findings can be generalised in law-like terms to broader populations (Cohen et al., 2007a).

‘Since the findings are presenting “the truth”, an absolute language is usually employed to report them (e.g. ‘the results show, find, indicate, prove’, etc.). The same language though is used by literature review studies, books and papers, without actually acknowledging that they step away from primary research to secondary commentary which just repeats “truth”. True scientific results are generalised and treated as “solid gold”.’ (Thoma, 2008, p.10)

However, if someone goes back to the primary research they may discover methodological issues which challenge or even refute the ‘objectively true’ outcomes’ (ibid.). For instance, Stanovich (1996), when arguing against the evidence for a distinct
etiology for learners with aptitude/achievement discrepancies, suggested that genetic linkage studies usually employ discrepancy criteria. However, there is no evidence in literature that the relationship which has been ‘found’ between neuroanatomical brain symmetry and reading disability would or would not be present if reading disability was defined using other criteria (ibid.). Stanovich (ibid.) cites the Larsen et al. (1990) study which ‘found’ that the planum temporale brain symmetry directly relates to phonological deficit. Larsen et al. (1990) defined the reading/IQ discrepancy in their sample of dyslexics using a non-verbal test (Raven Matrices test) that displays low correlation with reading and other verbal skills. The employment of a non-verbal test probably resulted in the inclusion of some subjects with low verbal and/or full scale IQs who might well have been classified as ‘garden-variety’ poor readers if other verbal measures had been used in the discrepancy assessment (Stanovich 1988; 1991; 2001). Therefore, the atypical symmetries may not be unique to dyslexics with reading/IQ discrepancy. Similarly, Stanovich (1996) suggested that heritability studies usually defined dyslexia employing the IQ/reading discrepancy criterion. However, genetic linkage may ‘disappear’ if the dyslexia reading/intelligence ability definition is replaced by, for example, a phonological awareness definition. A shift in the benchmark that defines dyslexia would mean different instruments, different measuring, different samples and finally different outcomes and so, hereditability may not be associated with reading difficulties outside the reading/IQ discrepancy definition of dyslexia. Such examples raise questions about methodological issues such as the measurement instruments, the sample recruitment methods or the sample size, which in fact challenge the ‘objective truth’ of the medical research (Thoma, 2008). Nevertheless, the biocognitive findings of scientific research are still recycled in the dyslexia literature as factors that cause dyslexia without considering the potential problems embodied in the recycling of scientific knowledge. ‘This does not mean that research within the medical discipline is valueless, but rather that its truthfulness should be considered more consciously’ (ibid., p.11).

A critical conceptualisation of how the medical model and the scientific research work based on a perspective that stands outside understandings of modernity seems to provide interesting insights (ibid.). In the Birth of the Clinic (2000) Foucault argues that eighteenth-century medicine conceptualises and creates the disease within three different spatialisations. By marking the three changes in spatialisations, he claims that ‘a new experience of the disease is coming into being’ (Foucault, 2000: xv). The
primary spatialisation of disease involves mapping the disease on the nosological table; that is identifying and classifying the symptomatology of the disease. This demands the free development of the disease and the removal of the patient’s uniqueness, as well as any unauthorised intervention by the scientist. In this concept, the focus is not on the dyslexic child but on the identification of the dyslexic symptoms and their classification under the label of dyslexia. The medical research on neurological or cognitive dysfunction is interested in producing knowledge about the nature of the disease (dyslexia); both the individual and the doctors are seen as unavoidable disturbances. In the secondary spatialisation, there is a shift of focus from the disease to the individual. The disease is embodied in a living organism with mass and volume. For example, dyslexia is located in the individual and the individual ‘has’ dyslexia. The disease of dyslexia (as constructed in the primary spatialisation) is not just imposed as a label on the individual, who happens to ‘have’ the dyslexic characteristics/symptoms, but is located in the individual’s body as a property. Tertiary spatialisation moves from the individual to the social space of the medical institutions and practices that support the individual. It includes all the activities by which in a certain society the disease is circumscribed, medically isolated and treated through cure centres (e.g. clinics, self-help organisations etc.). The institutionalisation of the disease inserts it into the social, political and economic space. In fact, Foucault (2000) claims that the medical space has come to coincide with the social space and that the medicalisation of society as a whole has been accomplished. The social space of dyslexia is supported by dyslexia institutes and organisations, national Departments of Education, academic communities, parents’ associations etc. which finance and conduct scientific research on the ‘disease’, find the truth about its nature and propose treatment programmes.

This epistemic system of treatment preserves the medical understandings about dyslexia which support the idea that something is wrong in the dyslexic individuals who should be ‘normalised’ by receiving external treatment (Thoma, 2008). Tertiary spatialisation is enacted through hierarchical observation, normalising judgement and their combination in a procedure: the examination (Foucault, 1995). During hierarchical observation, the expert in the field (e.g. doctor, specialist) observes the body of the individual as a spectacle and makes a normalising judgement of whether a behaviour is normal or abnormal according to an artificial order which is laid down by a law, a programme or a set of regulations (Elliot, 1999). Normalising judgement works on the basis of two opposing values: every behaviour is classified as good or bad. If it is bad or abnormal, it
will receive disciplinary punishment which is essentially corrective. ‘The examination is a combination of the techniques of observing hierarchy and normalising judgement. It is a normalising gaze, a surveillance that makes it possible to qualify, classify and punish’ (ibid., p.103). The power relations between the powerful experts, who belong to and support the medical system of treatment, and the abnormal individual are crucial for the understanding of the nature of the system. The medicalised perception of dyslexia lying within the individual who needs to be examined, diagnosed and treated, represents dyslexics as ‘vulnerable victims of their own flawed biology’ and places them at the mercy of powerful specialists who take full control of the treatment delivery (Mortimore, 2008, p.57). People (with dyslexia) are subjects to strategies, technologies and programmes which exercise power/knowledge (Foucault, 1980). As Foucault suggested in a 1979 interview, ‘medical power is at the heart of the society of normalisation’. Therefore, it can be suggested that ‘this model disempowers people with impairments’ (Mortimore, 2008, p.57). ‘The issue here is that it is hard to challenge the dominance of the system of scientific knowledge production, since it is so deep rooted in the structures of society and in the consciousness of people’ (Thoma, 2008, p.13). It can be suggested that many people take for granted that truth comes only from positivist thinking, and in cases they remain unaware that this is not the only way of thinking. However, some voices recognise and state the weaknesses of the medical system.

For instance, postmodern understandings of disability criticise medical claims about brain damage as the cause of dyslexia and the (universal) effectiveness of specialised treatment. It has been argued that since biological and cognitive etiologies of dyslexia have not identified actual lesions in the brain (Frith, 2002) that can be cured (e.g. using drugs or surgery), dyslexia is posited as a ‘lack’ of appropriate neurological connections, ‘poor’ left hemisphere activity, ‘less’ distinct representation of the sound of words or ‘different’ patterns of brain activity. Extending Lowe’s (2004) ideas to dyslexia it was suggested that ‘there is nothing ‘diseased’ in the dyslexic brain; rather there is a ‘thing’ missing from the neurological processing and functioning. Since there is nothing “inside” to cure, dyslexia as a neurological disorder is better seen in terms of “external management”. Strategies for treating dyslexia vary, but most of them rely on externally manipulating structures (e.g. phonology or morphology of words) in order to

\[\text{e.g. Paulesu et al., 1996; 2001, in Frith, 2002; Brunswick et al., 1999, in Frith, 2002.}\]
trigger responses in the dyslexic brain, where such structures cannot be sustained’ (Thoma, 2008, p.16). Such activities of tertiary spatialisation of the disease (Foucault, 2000) create an ‘external brain’ (Lowe, 2004) based on the knowledge of medical research. The more medical research investigates what is missing ‘inside’, the more scientific knowledge is produced for treating and regulating dyslexia ‘outside’. Nonetheless, this is like taking painkillers for high body temperature when the individual has flu. Decreasing the temperature may be relieving but it does not cure the virus. According to Frith (2002), knowledge accumulated by dyslexia research indicates that it is not a disease that comes with school and goes away with adulthood. Nor it can be cured simply by ‘external brain’ methods that improve reading and writing skills. This is undoubtedly only a symptomatic treatment with limited success. For example, external treatment with programmes on phonological awareness would possibly improve literacy for 80% of the students who are potentially dyslexic due to phonological deficits but will be unsuccessful with the 20% of dyslexic children whose difficulties cannot be explained as phonological impairments (ibid.). ‘In this sense, all ‘external brain’ programmes (e.g. multisensory programmes) seem to have limited degrees of success, especially because the nature of dyslexia is complex and the symptomatology shows a great variety of characteristics. The question is what is happening for that small percentage of dyslexic students for whom the external scientific programmes do not work’ (Thoma, 2008, p.16).

The medical model has been also criticised because although it initially attempts a surveillance of the abnormal dyslexic body as a spectacle, then the individual slips away and the medical research focuses on creating consumable scientific knowledge of the ‘disease’. Therefore, there seems to be a ‘miskinesis’ (Lowe, 2004) from the individual to the construction of dyslexia as an external ontology. ‘The medicalisation of dyslexia has provided a rich scientific knowledge that supports the notion of ‘dyslexia’ as a disease and its external treatment. A financial empire of organisations, parents, researchers, treatment programmes, research projects, books etc. is built on ‘dyslexia’. The concern is where the individual is in all these’ (Thoma, 2008, p.17). ‘When the brain cannot be cured, multifarious medical, educational and social networks, administrations, groupings, documents etc. become the regulation’ (Lowe, 2004, p.15) of dyslexia. The problem is that such medicalised institutions seem to be primarily interested in the maintenance of the market of the ‘external brain’ products and not in
the ‘body’ of the individual. In this sense, ‘outside treatment’ based on consumable and profitable medical knowledge becomes a challenging issue.

Interestingly the medical treatment system of dyslexia has acknowledged the role of environmental factors in the manifestation of dyslexic difficulties - probably under the pressure of social understandings of disability - but not as a primary causal factor (Thoma, 2008). Environmental factors are usually seen as part of the treatment promoted by the ‘external brain’ system. For instance, the BDA Introduction to Dyslexia (Peer and Reid, 2003) notes that dyslexia can be viewed from neurological, cognitive and classroom factors perspectives. However, classroom factors are perceived in terms of equipment (computer programmes and curriculum materials), authorities, policies, staff-development, classroom-based assessment (early identification and intervention) and positive attitudes towards disability. Therefore, environmental factors are seen as supplementary factors that do not cause dyslexia but possibly contribute to its management (Thoma, 2008).

Finally, one of the main criticisms towards the medical model of disability is the issue of stigmatisation. Since biological and cognitive approaches seek the etiology of dyslexia in brain or genetic abnormalities, they place the disability to within-the-individual factors. There are cases that suggest that dyslexic students and their families may experience a feeling of relief when the unexpected difficulties are explained to them scientifically (Gilroy and Miles, 1996). However, medical understandings of dyslexia, diagnosis and labelling have received strong criticism from the supporters of inclusive practices because they seem to be intolerant to difference and promote the ‘dyslexic stigma’. This does not imply that scientific research on dyslexia is useless, but as Poole (2003, p.169) interestingly points out, the literature review suggests that people with dyslexia have been occasionally characterised as ‘mis-wired’, having a variety of brain abnormalities, showing failure to gain cerebral dominance or having perceptual/cognitive problems in their processing nature, such as with phonological memory. Characterisations like the above suggest that ‘the dominant paradigm is still one of “in-person” weakness rather than one which shows quite clearly that it is the specific values which are attached to particular concepts and standards of literacy and numeracy which largely shape the way in which dyslexia is perceived and experienced” (Herrington and Hunter- Carsch, 2001, p.14).
Social model

Contrary to the traditional conceptions of dyslexia as a disability within a medicalised and individualistic model, the socio-cultural perspective, which emerged in the 1970s, has argued that people are not disabled because of the nature of their impairments but because negative societal attitudes transform impairment to disability (Oliver and Barnes, 1998). Impairments alone do not constitute disability; rather disability is the prejudice and the restrictions placed upon people with impairments by the society (Riddick, 2001).

According to Frith (1999) it is the cultural factors that shape the clinical picture of dyslexia and determine the degree of handicap that the disorder imposes on the child, which might range from none at all to serious burden. In modern western societies, dyslexia is suggested to be a disability since the emergence of literacy as a norm. As Riddick (2001, p.224) clearly states: ‘impairments underlying dyslexia have only become a major difficulty because of the move towards mass literacy and the consequent negative connotations attached to being “illiterate”’. Modern literate people tend to think that writing is a basic form of language and find it hard to imagine primary oral cultures with no knowledge of writing (Ong, 2002). The overemphasised theorising about the advantages of writing has proclaimed the superiority of literacy over orality and has disabling effects on the 800 million illiterates who are branded as second class citizens (Pattanayak, 1991). This polarised understanding of literacy seems to condemn those who cannot acquire it as stupid, disabled and having brain abnormalities. However, even within pre-literate societies dyslexics still had the same brain structure and cognitive processing as nowadays but this was not identified as a problem. Thus, the phenomenon of dyslexia may be seen in relation to the increased value attributed to literacy in modern societies that makes the inability to acquire it disabling. From a socio-cultural perspective, reading and writing are acquired skills, just like swimming. It is good to be an expert swimmer, but even keeping afloat is acceptable because swimming only matters when someone might, for example, fall in a river. People only need sufficient skills to stay afloat until they are rescued. However, when it comes to reading ‘keeping afloat isn’t good enough; keeping afloat is tantamount to drowning’ (McGuinness, 1998, p.32). The positive aspect provided by the socio-cultural theory is that ‘dyslexics are not doomed to a lifetime of failure as a result of their genetic endowments or physiological inadequacies but may in a sense be victims of the social...
and educational mores that prevail in the particular place at a particular time, and that this is open to change” (Burden, 2005, p.16).

Since mass-literate western societies demand high literacy levels among their members, curricula are inescapably massively literate too and high literacy standards seem to be rarely challenged. Commenting on the ‘dyslexia situation’ in Britain, Poole (2003) claims that it may be partly the result of the National Curriculum which reinforces the domination of left-brained, rational, cognitive thinking whilst disregarding any alternatives as irrelevant or even abnormal. In this sense, within a massively literate and left-brained school context, dyslexics’ alternative cognitive processing may not be appreciated as creative, but most likely as problematic. Similarly, dyslexia is not accompanied by a celebration of difference but rather dyslexics are seen as ‘damaged’ and potential gifts in other ways of thinking are neglected (West, 1997; Davis, 1997 in Mortimore, 2003). Therefore, according to the social model perspective dyslexia is located at the failure of the educational system to match the curriculum with the needs of the student (Snowling, 1987; Reid, 1994).

As opposed to modern times, in older societies literacy was not perceived as an absolute virtue. For example, in ancient Athens priority was given to the harmonic development of the body and the spirit (Katsoulakos et al., 2007). The development of virtues of aesthetics, sociality, modesty and insightful political thinking were highly valued (ibid.). Apart from learning to read and write young students spent many hours practising arts, music and doing gymnastics whilst rich adolescents who looked for a career in politics were taught rhetoric, the art of speech and the ability to convince people (ibid.). Therefore, the Athenian curriculum, reflecting on the values of society, focused on different aspects of human development. It can be suggested that in such a context the inability to master the fine arts (e.g. sing in tune) was perhaps more disabling than the difficulty to acquire literacy.

Some educationalists go further than the appreciation of the role of the primacy of literacy in modern societies and doubt even the existence of dyslexia as a phenomenon. It has been argued that it is largely in the imagination of middle-class parents who either use it as a fig leaf to hide problems of a different nature or to exacerbate difficulties because of their own concerns and anxieties (Portsmouth and Caswell, 1988). However, the view that ‘dyslexia’ is a fashionable invention of middle-class parents appears to be
based on anecdotal opinions and lacks empirical research (Riddick, 1996; Miles, 2006). The existence of dyslexia is also challenged as a construct of the scientific paradigm which has dominated our culture since Descartes (Poole, 2003). According to Solvang (2007, p.82) ‘medicalisation represents a form of social control. Behaviours that are perceived by society as problematic and unacceptable are understood and described with medical terms positioning certain individuals as ‘abnormal’ or ‘incapable’. The medicalisation mechanisms transform a social problem into a personal with the use of medical metaphors which are based on biological determinism (White, 2002). Society seems to use medicalisation as a mechanism for controlling the population by condemning those who fail to master literacy not to reach their full potential. It is interesting that illiteracy is usually related to poverty, malnutrition and unintelligence whilst literacy is equated to productivity, advancement and intelligence (Pattanayak, 1991).

Under the influence of social perceptions of disability, medical research on dyslexia has also experienced attacks straight to the heart of its bedrock assumptions. McGuinness (1998) for example, strongly criticises the deficit model and dispels as myths two powerful scientific dyslexia axioms. The first suggests that reading is encoded in genes and supports theories about the hereditability of dyslexia through certain chromosomes (Pennington et al., 1992). However, dyslexia cannot be inherited; it is the phonological processing which might be inherited, not the reading. McGuinness (1998) argues that scientists seem to know that. However, the habitual employment of the medical terminology becomes confusing for the layman who is unaware of relevant research. Families of poor readers should be informed that there is no such thing as a ‘reading gene’ or ‘dyslexia gene’, or ‘inherited bad reading’, because ‘it is the natural abilities of people that are transmitted genetically, not the unnatural abilities that depend upon instruction’ (ibid., p.140). Since literacy skills demand instruction, they cannot be genetically encoded.

The second axiom/myth advocates that dyslexics have poor literacy skills because of some sort of brain damage. McGuinness (1998) claims that people who work within a clinical model tend to think in dichotomies: perfect/imperfect, healthy/diseased, intact/damaged. If reading though is a skill like swimming or singing, it may well be seen within a continuum of variations. The inability to sing in tune is not due to brain damage but lack of talent, and singing seems to be far more natural (biological) than
learning to read and write. Furthermore, writing is not a spontaneously developed skill (like talking or singing) that humans find easy to acquire, but it is rather a highly demanding artificial system that is developed through regular training (Ong, 2002). The history of the evolution of writing suggests that it followed a long and complex process of trial and error through the centuries before reaching the level of the phonological alphabet (ibid.). So, it is questionable whether the inability to acquire literacy skills should automatically mean brain damage. Humans use their brains to learn how to decode or compose text but this engages the whole brain. For example, reading requires the visual system that discriminates the letters, the visual-motor commands that control the eye movement to scan the text smoothly, the language system to remember the order of the words, the auditory analysis of sounds to process phonetic writing, articulatory control to read aloud, focused attention, etc. These processes are integrated in brain systems (e.g. frontal lobes, parietal lobes, basal ganglia) and so there does not seems to be a specific ‘place’ for reading in the brain (ibid.). ‘Since reading is a highly complex process, reading difficulties are not seen as result of brain damage but rather as a normal variation within a biological continuum’ (Thoma, 2008). After all, functional brain-imaging studies and EEG recordings have shown that diagnosed dyslexics have no brain damage to any part of their brain (McGuiness, 1998; Frith, 2002). Modern neuro-anatomical studies have associated dyslexia with greater brain symmetry of the planum temporale in both hemispheres than is found in normal readers (McGuiness, 1998; Frith, 2002), but 35% of the population have symmetric brains and this does not suggest abnormality (McGuiness, 1998).

In opposition to medical understandings, educational models of dyslexia highlight the importance of environmental factors such as inadequate exposure to literacy or bad teaching as exacerbating difficulties (Riddick, 2001) or even causing them. McGuinness (1998) has suggested that there is no evidence for any special type of reading disorder like ‘dyslexia’ and that poor teaching accounts for low levels of literacy. If there was something wrong with children’s brains or an inherited deficit, they would not improve by instruction. Children fail to acquire literacy in school because they are not being taught correctly. Many teachers are not aware that alphabet is a code and ‘if you don’t understand what you’re teaching, you will mislead your students and risk causing them to fail’ (ibid., p.77). They teach that ‘letters have sounds’, rather than that ‘speech has sounds’ and these ‘speech sounds have letters’ (ibid.). Nevertheless, the English system has only 26 letters for 44 sounds. It is not surprising that such ‘peculiarities’ may be
highly confusing for novice readers. However, teachers and other literate adults with well-established knowledge of the alphabetic discipline tend to perceive the acquisition of the writing system as a ‘natural’ process whilst overlooking the complexities and the subsequent difficulties in learning to use the alphabetic code (McGuiness, 1998; Ong, 2002).

Implicit in poor instruction is the assumption that due to cultural and historical factors not all languages have the same degree of complexity in phonology and grammar. Complex or irregular orthographic systems make high demands and could under certain circumstances put off novice students from learning how the alphabet operates (Frith, 2002, p.52). Having this in mind we can talk about ‘dyslexia-friendly languages’ and ‘dyslexia-friendly writing systems’ (Frith, 1999). In a perfect alphabetic writing system, each sound would have one, and only one, symbol. Some languages seem to come close to this perfect fit (e.g. Finnish, Turkish), some deviate a little bit (e.g. Spanish), some are even less regular (e.g. Italian, Greek) and for others the deviation is considerable (e.g. French, English) (Spencer, 2000).

The English language system is considered as a typical example of irregular writing with ‘too many sounds chasing too few letters’ and creating a major barrier for the beginner reader (McGuiness, 1998, p.82). In linguistic terminology, there are too few graphemes\textsuperscript{4} to represent the English phonemes\textsuperscript{5} and therefore, certain graphemes have to be used more than once, if each phoneme is to be separately represented (Department of Education and Science [DES], 1975). Due to the irregular relationship between graphemes and phonemes, the English language has been characterised as a ‘deep’ orthographic system (Chomsky and Halle, 1968), posing increased difficulties to those attempting to acquire it.

In comparison to English, the Greek writing code has a consistent grapheme to phoneme correspondence and so, it is suggested to have a ‘shallow’ orthographic system (Porpodas, 2002). In fact, at its generation, ‘the Greek alphabet was tailor made for the Greek language, a perfect fit, one symbol for each phoneme or sound’

\textsuperscript{4} A grapheme is the fundamental unit in written language which corresponds to a single phoneme.

\textsuperscript{5} A phoneme is the smallest contrastive unit in the sound system that distinguishes one utterance from another in a given language (e.g. /p/ in pat) (Loos et al., 2004). A phoneme is manifested as one or more phones (phonetic sounds) in different environments. These phones are called allophones (ibid.). A phone is an unanalysed sound of language. It is the smallest identifiable unit in a stream of speech.
(McGuinness, 1998, p.71). However, historical changes through the centuries moved the Greek writing system away from the perfect phonological fit (Gelb, 1969). Despite the fact that in modern Greek there are 24 letters for 25 sounds (Tsolakis, 2006) there are irregularities in the graphemic representation of the sounds. For instance, the modern Greek writing code has an inadequate number of consonant symbols and so, some consonants graphemes are grouped together to form ‘consonant digraphs’⁶ (e.g. <μπ> for /b/, <ντ> for /d/, <γκ> and <γγ> for /g/, <τσ>, <τζ>) in order to supplement the lack of correspondent graphemes. There are also vowel digraphs (e.g. αι /e/, οι /i/, ει /v/, ου /u/) and ‘combinations’ which refer to a makeup of a consonant and a vowel that represent two different sounds (e.g. αω /av/,/af/ and ευ /ev/, /ef/).

The multiplicity of spelling alternatives for a single phoneme (especially for vowel phonemes) seems to be the major difficulty in learning writing and reading.

The phoneme /i/ is represented by five graphemes: <ι>, <η>, <υ>, <ει>, <οι>, <υι>.

The phoneme /e/ is represented by two graphemes: <ε>, <αι>.

The phoneme /o/ is represented by two graphemes: <ο>, <ω>.

The phoneme /j/ is represented by four graphemes: <ι>, <η>, <ει>, <οι>.

‘Although consonant phonemes seem more consistent, they also provoke difficulties. They are represented by one or two graphemes (e.g. <μ> and <μμ> for /m/), even if they are always pronounced as single. The only exception is <γγ> which is pronounced /g/ instead of /γ/ which is the normal sound of the single letter. Moreover, the graphemes <ξ> and <ψ> correspond to combinations of phonemes /ks/ and /ps/. However, in other cases the same phonemes are represented by double clusters of graphemes <κσ>, <κζ> and <πσ>, <πζ> respectively. The combinations of graphemes <μπ> and <ντ> correspond both to phonemes /b/ and /d/ and to the combination of phonemes /mb/ and /nd/. Finally, the phoneme /g/ is written as <γκ> and <γγ>, but the same graphemes stand for the phoneme /ng/, especially in the case of <γγ>’ (Thoma, 2008, p.25).

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⁶ In Greek linguistics consonant digraphs are defined as graphemes that consist of two consonant-letters but their combination corresponds to only one consonant sound.
Contrary to the general belief for simplicity – which is very possibly the result of the comparison of the Greek system to other less transparent phonological systems - the above presentation of phoneme to grapheme correspondences suggests that the Greek writing system is characterised by a high degree of complexity. The inconsistencies have occurred because through the centuries there was an allophonic variation in pronunciation of phonemes but spelling remained stubbornly consistent to the outdated representations (Mavrommati and Miles, 2002). Modern Greek spelling has lost part of its phonetic character and follows ‘historical’ orthography which reflects the ancient etymology of the words and not the phonemic components (Mavrommati and Miles, 2002; Porpodas, 2002).

‘The inconsistency between historic orthography and the modern so-called “phonological writing” raises questions about the efficiency of phonics programmes in acquiring literacy. The existence of so many spelling alternatives in representing a single sound makes writing complex and demanding’ (Thoma, 2008, p.26). The main issue seems to be in the vowel phonemes rather than consonant phonemes, which appear to be more consistent (Chomsky and Halle, 1968; Clystal, 1995). For instance, Greek pupils find it difficult to decide which grapheme to choose among the \(<ι>\), \(<η>\), \(<υ>\), \(<ει>\), \(<οι>\), \(<υι>\) to represent the sound /i/ in a particular word (Porpodas, 1989). Grammatical rules need to be consolidated so as to decide which is the correct spelling but this may not be an easy process, either because grammatical rules may perhaps not be easy to memorise or because certain ‘ambiguous’ spelling cannot be predicted by a grammatical rule. Literature suggests that students have difficulties in memorising ‘ambiguous’ spelling patterns (ibid.). However, ambiguous spelling has been the outcome of the notion of ‘correctness’ that was developed by a group of scholars who decided that ancient spelling is more appropriate than modern phonological spelling (Kotrotsou-Lontou, 2004). The notion of correctness is related to the Greek linguistic issue which has a long history going back to the 1st century when the phenomenon of Atticism introduced diglossia in Greek. Scholars showed preference for an ancient type of written language which was thought to be ‘more correct’ or ‘superior’ to the everyday oral language (ibid.). The linguistic issue was extended to political issues with politicians and scholars claiming that diglossia is natural and that there should be a language for educated people and another for the illiterate masses (Mackridge, 1990). Therefore, it can be suggested that language was used as a mechanism of social control.
However if ambiguous spelling is an arbitrary decision of a group of ‘powerful’ people, many questions are raised about the expectations placed on students to learn reading and writing only by exposure to ‘good’ literature, on the basis of being natural in the same way that learning to speak is natural (McGuinness, 1998).

Finally, although most people believe that alphabetic writing is naturally acquired and cannot think of life without it (Ong, 2002), a brief review of the evolution of writing systems can easily suggest that alphabetic writing is the most unnatural and demanding writing system ever designed (MacGuinness, 1998; Ong, 2002). It splits sound into units that do not naturally split in oral speech (MacGuinness, 1998; Ong, 2002). Frith (2002, p.64) claims that ‘alphabetic writing systems make very high demands on phonological ability. Other writing systems that do not use small units of speech sounds as a basis for written symbols, but use whole syllables or whole word sounds or meanings should therefore be easier to acquire for people with phonological impairments’. In support of this argument Frith (2002) quotes a case study (Wydell and Butterworth, 1999) of a 16-year-old boy (Butterworth and Tang, 2004), bilingual in English and Japanese, whose severe dyslexic difficulties were confined to English only. The low incidence of dyslexia in Japan and China - about 1.5% (ibid.) - has supported the hypothesis that logographic systems are easier in terms of reading acquisition. The Chinese graphic tradition of logographs provides optimal conditions for direct lexical access, and so allows the development of silent reading earlier than in the West (Saenger, 1991). However, contrary to the popular misconception that Chinese writing consists solely of ideographs, approximately 80% of the characters are semantic (meaning) - phonetic (pronunciation) compounds (Caravolas, 2005). The advantage of Chinese is that semantic information can provide clarifications for ambiguous homophonic characters (ibid.). Therefore, although Chinese students with dyslexia have phonological difficulties similar to their alphabetic counterparts (Ho et al., 2000) the structure of the language seems to facilitate reading. If that is the case, it can be suggested that it is not only that some alphabetic writing systems are easier than others due to the transparency factor but also that the nature of the alphabetic code itself may influence dyslexic difficulties, even in ‘shallow’ systems. If the alphabet is an artificial

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7 Logographs are symbols that stand for whole words.
code and writing is an unnatural skill, it is questionable why dyslexia is solely attributed to within-the-child factors.

However, social model understandings have received criticisms on the basis of defining disability solely as a socially determined situation (Norwich, 2009). For instance, the social model assumes that dyslexia becomes a disability under the over-emphasis put on literacy in modern societies assuming that social factors are active and that impairments have no influence in this process (ibid.). In other words, although it re-examines the extreme medicalisation of disability and attempts to protect humans from unfair societal oppression, it goes too far in denying the role of the impairment altogether (ibid.).

**Bio-psycho-social model**

Usually explanatory theories see dyslexia as an either/or situation. ‘Mostly they either postulate a *cognitive deficit* or blame *environmental* factors’ (Frith, 2002, p.48). However, there are voices claiming that ‘on their own, neither model is adequate, although both are partially valid. Disability is a complex phenomenon that is both a problem at the level of a person’s body, and a complex and primarily social phenomena’ (WHO, 2002, p.9). What is perhaps needed is a broader, more encompassing model that takes account of the interactions between social and individual aspects in the process of literacy acquisition (Norwich, 2009). Such a model that goes beyond simplified over-individualised and over-socialised suppositions was proposed by WHO (2002). The bio-psycho-social model of disability is an attempt to integrate the social and the medical models (Farrell, 2004) and posits, as the term suggests, that a combination of biological, psychological and social factors play a significant role in disability. The model encourages a holistic examination of the interactive factors instead of isolating just one factor (Stevens and Smith, 2005).

In an attempt to come to a compromise regarding the different explanatory theories of dyslexia and provide a more holistic causal model, Morton and Frith (1993; 1995) suggested a three-level framework (see Figure 1). According to this framework the *biological level* suggests that dyslexia has a genetic or neurological-brain origin. This organic causation may lead to specific processing deficits at a *cognitive level*. 

Theoretical propositions include difficulties in speech processing, in visual or auditory perceptual processing, and in motor or temporal processing (Frith, 2002, p.46-47). The subsequent effects of the cognitive level are clearly observed at a behavioural level at which a child demonstrates reading and writing difficulties which are typical manifestations of dyslexia. All three levels interact with the environmental context which plays a mediating role. Environmental causes may include features such as poor teaching, cultural values and socio-economic factors. It is suggested that each level informs the rest and they all interact with the environmental context. However, the links between them should not be perceived as deterministic, but rather as probabilistic (ibid.). For example, it is acknowledged that due to the increased brain plasticity and abnormality at neurobiological level does not necessarily suggest cognitive deficit.

Although this model attempts to reconcile competing theories, it seems that the main explanation still lies in within-person factors with dyslexia being primarily a biocognitive deficit and perhaps secondarily influenced by contextual factors. As Frith (2002, p.45) explicitly notes, ‘dyslexia can be defined as a neuro-developmental disorder with a biological origin and behavioural signs’. Cognitive factors are significant in terms of causation, whilst environmental factors are important in terms of treatment (ibid.). Poor reading can be attributed to socio-emotional problems of environmental origin but this does not constitute dyslexia if other conditions are missing (ibid.). Therefore, cognitive and contextual factors may be seen as serving different or even incompatible functions (causation versus remediation).

\[\text{Figure 1: The three-level framework (Frith, 2002, p.46).}\]
However, Frith (2002) provides an alternative scenario about dyslexia which seems to explain the paradox in the relation between dyslexia, which has a biological basis, and literacy, which is primarily and supremely a cultural phenomenon. The scenario seems to shift perspective and draw increased attention to social-cultural understandings which support the notion of dyslexia as a cognitive difference, as opposed to a cognitive deficit. It suggests that ‘genetically influenced peculiarities in brain anatomy, present in a minority of people, preclude a certain type of information processing. This need not be a disadvantage in daily life. However, it could turn into one, if a particular writing system was strongly reliant on the type of information processing in question. Those individuals born without this special facility would have a hard time learning written language. They would suffer especially where there is a premium on literacy, and even more, where they have to learn complex orthography’ (ibid., p.54). In this sense, dyslexics may have different brain structures or different cognitive processing but this is not adequate in itself to be disabling. It is the environmental factors that may turn the difference into disability. So, dyslexia in a mass literate context may constitute a major handicap while it may not even be an issue in a context that does not attribute great value to alphabetic reading and writing. Frith (2002) mentioned other factors that may influence the extent of limitation placed upon the individual such as the degree of severity, age, personality, demands from environmental sources, personal needs and commitments, as well as types of support.

Summarising, it seems that initial conceptualisations of dyslexia operated within a medicalised deficit model which regarded dyslexia as a disease and attributed it to within-the-individual explanations that focus on the individual’s malfunctioning in isolation from the environmental context within which the malfunctioning develops (Poole, 2003). Although still powerful and widespread, the scientific model gradually gave way to more social perspectives which understand dyslexia as a difference rather than a deficit (Singleton, 1999) and perceive disability as an oppression placed by society upon certain individuals. More recently, there were also attempts to compromise between different - and usually competing - theories by providing more complex frameworks within which all modes of explanations have a possible allocation. Although such models may stress the primacy of one model over the others, they are indicative of the tendency towards more holistic and complex understandings that focus both on the self and the social contexts and leave open the possibility of new explanations that may emerge from the interactions between the existing models.
At this point, it is important to mention that the aim of this review is not to support one of these understandings as more sound than the others. After all they all seem to have strong points as well as pitfalls and limitations. The intention of the study is to see how the participants conceptualise ‘their dyslexia’. Do they employ any of the models analysed above and if so, does this relate (and how) to their coping efforts? Before though describing the research questions, it seems important to explore the concepts of coping as developed in the relevant theory and conceptualised in research projects in relation to dyslexia.

**B. Understandings of coping**

The vast majority of work in the field of coping has occurred within the last few decades (Carver, 1996). Some work existed though before the 1970s using different terminology of psychoanalytic origin (Lazarus, 1999). The concept of coping has been mainly explored and theorised within the psychological discipline. As Martz and Livneh (2007, p.20) put it, ‘historically, coping… emerged largely as part of an emphasis on viewing human functioning within a pathological context, which typically included the terms mental illnesses, abnormal behaviours, maladaptive functioning, and impaired psychological structures and processes’. As a result, coping has been extensively explored in relevance to illness (e.g. AIDS, arthritis, burn injury, cancer, diabetes, epilepsy) and disability (e.g. mental illness, brain injury, physical disability). No matter that disability has been on the research agenda of coping and that dyslexia has been extensively conceptualised within the medical model as a developmental delay in reading and writing acquisition, the research community has not so far generated cohesive work on coping with dyslexia.

The literature review reveals that attempting to provide one accurate and universally accepted definition of coping is not possible since coping is a broad and complex construct. Generally, by coping we refer to the things people do, the efforts they make and the strategies they utilise to avoid being harmed by the strains of life (Pearling and Schooler, 1978). Snyder and Dinoff (1999, p.5) defined coping as ‘a response aimed at diminishing the physical, emotional, and psychological burden that is linked to stressful life events and daily hassles’. Coping has been also perceived as the set of behaviours
individuals employ to prevent, lessen or respond to stressful or challenging situations (George and Siegler, 1981). Finally, Lazarus and Folkman (1984, p.141) defined coping as ‘constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person’. As it will be presented in the following sections, different definitions stress different aspects of coping such as personal dispositions, situation-specific appraisals or the interactional relationship between these factors (Livneh and Martz, 2007).

**In-person, trait-oriented approaches**

To start with, the concept of coping emerged out of self-oriented conceptualisations and was initially explored as a stable personality trait. The study of coping has its roots in clinical psychology and psychiatry, which focused on the psychoanalytic traditions of human struggle and ego defence against distress. Freud (1930/1961) identified intoxication, displacement and sublimation (of libidinal urges), use of illusions emerging from strong imaginary wishes and total withdrawal from the real world when facing reality may be too painful, as methods that eliminate human suffering and support pleasure. According to Freud (1923), defences operate on an unconscious level.

Anna Freud (1966) explored further the concept of the ego’s defence, identifying several defence mechanisms (e.g. suppression, denial, projection, reaction formation, hysteria, obsessive-compulsive behaviours and sublimation). She claimed that the ego utilises such modalities to reduce anxiety and regulate negative emotions and distressing impulses. These early psychodynamic perceptions of ego-defending and coping posited that coping has little to do with the situational stimulus. Rather, it is primarily perceived as a firm personality mechanism that seeks to regulate emotions. Ego-defence has received criticism on the basis of being maladaptive by default, by distorting reality (Aldwin, 2007).

During the following decades the study of coping research placed increased emphasis on the defensive taxonomies and hierarchical structures inherent in humans. Within this perspective of coping the work of contributors such as Menninger (1963 in Lazarus and Folkman, 1984), Haan (1977) and Vaillant (1977) has been influential. Menninger (1963, in Lazarus and Folkman, 1984) proposed a five-order hierarchy of regulatory devices which are ranked according to the degree of internal disorganisation. The first-
order coping devices include strategies (e.g. humour, crying, talking it out, swearing) for everyday life stressors and are considered normal, unless they are used to extremes and so, they become indicators of internal dyscontrol. Second-order devices involve withdrawal by dissociation, withdrawal by displaced anger, etc. Third-order devices include repetitive outbursts of anger (e.g. violent assaults, panic attacks). Finally, fourth-order devices represent increased disorganisation whilst fifth-order can be described as a ‘total disintegration of the ego’ (Lazarus and Folkman, 1984, p.119).

Vaillant (1977) challenged the traditional psychoanalytic thesis that ego-defence is inherently pathological and claimed that some defence mechanisms can be adaptive and healthy and maintain the ego’s integrity. Ego-defence mechanisms were arranged in a hierarchy of health and pathology that consists of four levels (projective, immature, neurotic and mature) based on the degree of deviation from reality, with lower defensive levels involving more distortion and pathology and higher defence levels being the most mature way of dealing with stress. Moreover, Vaillant (ibid.) used interviews with ‘mentally healthy’ men from a 30-year longitudinal research, called the Grant Study (Vaillant, 1993; Vaillant and Mukamal, 2001) in his hierarchical model and suggested that as people grow up their defensive processes often change from immature to mature. Moreover, he claimed that people with mature defence mechanisms tend to be happier and live longer. However, Vailliant’s theory was criticised for insisting that defence mechanisms - even those which demand planning - are unconscious but also for being ambivalent about what is conscious and unconscious (Aldwin, 2007).

Haan (1977) explored defensive mechanisms within a tripartite model of ‘ego processes’ for solving problems of daily life which include coping, defence and fragmentation. The three modes differ in their basic properties but they are parallel in their operation (ibid.). More specifically, coping entails rational, purposeful and reality-directed problem-solving whilst defence involves distortion of reality, denial of a situation and ‘unyielding fortification’ (Haan, 1993, p.260). Finally, fragmentation is a form of adaptive failure, according to which the person seems to be unequal to the challenges of life and retreats from interpersonal reality (Haan, 1977). Haan identified ten basic or generic ego functions, which can be expressed in the three aforementioned modes, and further divided them for conceptual convenience into four categories: cognitive, reflexive-intraceptive, attention-focusing, and affective-impulse regulating. These processes support the maintenance of a consistent sense of self and a realistic
relationship with the environment (ibid.). Haan’s theory has some interesting aspects, differentiating itself from the traditional Freudian ego functioning model. For example, it suggests that defences are not inherently conscious and unconscious but operate on a preconscious level as opposed to the Freudian unconscious level. Moreover, the individual is an active rational agent instead of being guided exclusively by impulses and wishes (Radnitz and Tiersky, 2007). There is also a difference in the motives. According to Haan (1997) the motive is the need for self-consistency whilst in Freudian theory it is the sexual and the aggressive drives (Radnitz and Tiersky, 2007). However, Haan’s theory has been criticised for the inadequacy of her constructs with regard to motivation (Western, 1985), for supporting the psychodynamic position that defence mechanisms such as denial are by definition maladaptive and for being ‘too neatly categorical’ (Aldwin, 2007, p.107).

Psychoanalytic theories paved the way for ‘macroanalytic’ approaches (Krohne, 1996) which argue for coping as a structural element or a characteristic of personality (e.g. consistent trait or style of coping). Research within this approach groups individuals in different coping styles (Lazarus and Folkman, 1984). For instance, Millon (1982 in Aldwin 2007) identified different styles of coping with health problems: individuals who are emotionally flat and use an introversive coping style, individuals who are sociable and follow advice religiously, those who are confident and motivated to regain their health, those who are aggressively unwilling to accept the sick role and attack the problem, people who see illness as a weakness and attempt to conceal or deny the problem, and people who adopt a long-suffering style and are likely to complain. Such approaches though have been criticised on the basis of primarily adopting a pathologising perspective and ignoring individuals who cope well (Aldwin, 2007). Moreover, the strict personality categorisation seems to ‘pigeonhole’ people in questionable ways and ignore environmental factors which may shape the individuals’ behaviour (ibid.)

As Chronister and Chan (2007, p.51) mention, numerous macroanalytic models have been proposed by the literature, dichotomising coping into opposite dimensions such as defence - perceptual vigilance, repression - sensitisation, denial - intrusion, avoidance - vigilance, monitoring - blunting, attention – rejection, and vigilance - cognitive avoidance. Although there are a variety of different oppositional dichotomies it seems that the notions of approach and avoidance are central to all these models of coping,
implying a movement either towards or away from the stressor (Roth and Cohen, 1986 in Chronister and Chan, 2007). For instance, in the case of the repression-sensitisation (Byrne, 1961 in Chronister and Chan, 2007) dichotomy repression can be perceived as an avoidance of anxiety (e.g. denial of the stressor) while sensitisation can be seen as an approach towards the stimulus of anxiety (e.g. information search) (Roth and Cohen, 1986 in Chronister and Chan, 2007).

With regard to the efficacy of the approach-avoidance modes of coping, it is hard to draw certain conclusions due to the diversity of the conceptualisations and the measurement approaches (Chronister and Chan, 2007). Generally, literature reports that there is no evidence that one type of strategy is uniformly effective or better than others (Zeidner and Saklofske, 1996). However, with regard to time, usually approach strategies are considered more effective on a long-term basis or at later stages of coping, while avoidance strategies seem more successful on a short-term basis or at early stages of coping (Lazarus, 1983). Moreover, approach strategies seem to be more effective in controllable situations whilst avoidance strategies seem to be more useful in situations which are considered uncontrollable (Roth and Cohen, 1986 in Chronister and Chan, 2007). However, research has not confirmed the superiority of one strategy over the other (Chronister and Chan, 2007) and literature suggests that no coping mode is consistently effective (Silver and Wortman, 1980).

Although the macroanalytic model has been central in the exploration and explanation of the notion of coping (Chronister and Chan, 2007), it has received sustained criticism at the heart of its structure. Dichotomising coping strategies in two broad modalities may be simple, elegant and easy for the classification of a large number of specific strategies, but it runs the risk of oversimplifying a very rich and broad concept (Lazarus, 1999). The bi-polar approach-avoidance modes of coping only explain behaviours that lie either in one category or in the other, but do not accept and provide in-between explanations for an individual who may use both coping strategies (Chronister and Chan, 2007; Lazarus, 1999). However, approach-avoidance coping modes are not mutually exclusive categories (Aldwin, 2007) and individuals cannot be placed simply and solely in one category, because most of them use tend to use both strategies (Roth and Cohen, 1986 in Chronister and Chan, 2007; Lazarus, 1999).
Moreover, there were criticisms of weak discriminatory power between different bi-polar models of trait-based constructs (Folkman and Lazarus, 1985; Lazarus, 1999). For instance, research on repression-sensitisation as a coping style has expressed concerns whether repression means a low anxiety trait or defensiveness. Typically scoring high for repression implies a psychologically sound person. However, this person may in reality use repressive behaviour in a defensive way, so as to hide distress (Hock, et al., 1996; Weinberger, et al., 1979; Shedler, et al., 1993; 1994 in Lazarus 1999). As a result there are still serious concerns about whether cognitive styles should be seen as polarised dichotomies or continuous dimensions, which in turn generates debates about measurement techniques (Lazarus, 1999). Lazarus and Folkman (1984) suggested that the majority of trait measures underestimate the complexity and the variability of coping efforts in real-life situations because they tend to evaluate solely a single dimension of coping (e.g. repression-sensitisation). However, ‘naturalistic observation indicates that coping is a complex amalgam of thoughts and behaviours’ (ibid., p.129).

Finally, the bi-polar macroanalytic models of coping have been highly criticised for situational invariability and inadequacy in determining the unpredictability of coping behaviour (Lazarus and Folkman, 1984; Folkman et al., 1986). Research has suggested that there is no one-to-one relationship between personality traits and actual coping responses implying that there seems to be a need to take into consideration the peri-operative situation (Krohne et al., 1996). As Aldwin (2007, p.112) put it, ‘it would be a mistake to simply reduce stress and coping processes to personality traits’ and neglect the contribution of contextual and situational factors in coping responses.

**Situation-oriented, process-based approaches**

‘In the late 1970s a major new development in coping theory and research occurred in which the hierarchical view of coping, with its trait or style emphasis, was abandoned in favour of a contrasting approach, which treated coping as a process’ (Lazarus, 1993, p.235). In opposition to the macroanalytic approaches, within the microanalytic orientation (Krohne, 1993; 1996) coping is considered as a state-specific response and a fluid process which changes over time, influenced by the situational variability (Lazarus, 1993). Microanalytic understandings of coping emphasise the central role played by the environmental context, and also highlight the individual’s appraisal of the situation (Lazarus and Launier, 1978).
Chronister and Chan (2007) suggested that nowadays, models that operate within the microanalytic dimension maintain central stage in literature. The same authors noted that pivotal to this orientation is Folkman’s and Lazarus’s (1980) early work - as opposed to their later work which lay within transactional approaches - which signified a change of perspective focusing on coping as a process. This early work identified three main coping features: a) assessment should be concerned with what the person actually does as opposed to what the person usually does, b) what the person does or thinks should be evaluated in relation to the specific context, and c) the notion of process implies change. Different coping strategies are used in different times in a process of coping, which suggests that static measures of traits seem to be insufficient (Lazarus and Folkman, 1984).

Moreover, coping functions were classified in two major ways: problem-focused and emotion-focused behaviour. The majority of the current coping scales are subscribed to these two dimensions in some way (Lazarus, 1993; Chronister and Chan, 2007). Problem-focused strategies aim to change reality by gathering information and acting either on the environment or on the self (Lazarus, 1999). ‘Included in the former are strategies for altering environmental pressures, barriers, resources, procedures and the like. The later includes strategies that are directed at motivational or cognitive changes such as shifting the level of aspiration, reducing ego involvement, finding alternative channels of gratification, developing new standards of behaviour or learning new skills and procedures’ (Lazarus and Folkman, 1984, p.152). Although inward-oriented strategies cannot be traditionally considered as problem-solving, they tend to help the individual manage the problem and so they are included in problem-focused strategies (ibid.). Emotion-focused function includes efforts which aim to regulate emotions and minimise the distress (e.g. avoidance, distancing, selective attention) as well as cognitive strategies that aim to increase emotional distress (e.g. experience distress acutely in order to get relief) and cognitive efforts that change the meaning of a situation but without changing the objective situation. Other emotion-focused coping strategies such as avoidance or selective attention do not change the meaning of the situation but put it temporarily aside. Endler and Parker (1990) claimed that problem-focused coping is more task-oriented, while emotion-focused coping is more person-orientated. Also, it seems that the selection of coping strategies depends on whether or not the situation can be changed. If it is considered changeable, then most likely
problem-focused instrumental strategies will be used; if not, then emotion-focused strategies are more likely to be employed (Folkman and Moskowitz, 2004). Finally, problem-focused strategies seem to be relatively limited in comparison to the wide range of emotion-focused strategies discussed in literature (Lazarus and Folkman, 1984).

Even though emotional and problem-focused dimensions of coping have been the most cited dimension in the coping literature (Folkman and Moskowitz, 2004; Chronister and Chan, 2007), there has been criticism about the two categories on the basis of being limiting, empirically ambiguous and nonsolid (Carver et al., 1989). More specifically, it is still debated which specific coping responses belong to each of the domains. Scheier et al. (1986) suggested that factors which are typically considered to constitute emotion-focused coping, often diverge/deviate extensively and are inversely associated to problem-focused coping. Moreover, research suggests that the ‘Ways of Coping’ questionnaire developed by Lazarus and Folkman (1984) tends to measure several factors, rather than just two (Aldwin et al., 1980; Folkman and Lazarus, 1985; Scheier et al., 1986). However, Lazarus (1999) claims that it is a common mistake - especially in the field of coping measurement - to treat the two dimensions as oversimplified distinctions and even to place one against the other trying to determine which is more effective. ‘The key point is that in nature the two functions of coping are seldom if ever separated. Both are essential parts of the total coping effort, and ideally, each facilitates the other’ (ibid., p.124). Moreover, he suggests that there is a common mistake to treat the Ways of Coping questionnaire as a personality trait test whilst it was developed to be a process approach (ibid.). However, Lazarus (1999) acknowledged that the process approach to coping has a major limitation; that is, the narrowness of the case. It seems that attempts to depict the richness of the situation run the risk of being too contextual at the expense of the overall picture.

According to Chronister and Chan (2007) such criticisms resulted in the emergence of new dimensions. Avoidance came up as a third broad coping mode at the microanalytic level (Billings and Moos, 1981; Feifel et al., 1987) after having a long research history within the macroanalytic tradition of coping. Endler and Parker (1990) suggested that avoidant coping strategies can include either problem-focused task-oriented coping, or emotional-focused person-oriented coping strategies. A person may attempt to escape from a stressful situation either by seeking external support (e.g. asking from other
people to do the work for them) or by engaging in a self-destructive activities (e.g. watching television to ‘forget’ the stressor).

Besides avoidance, appraisal emerged as another significant dimension in the exploration of coping. People rely on a personal system of beliefs, ideas, values, goals and commitments which they use to evaluate and modify the meaning of a situation (Park and Folkman, 1997). A general definition of appraisal may be the conscious evaluation of whether a situation is considered pleasant, harmful, threatening, a loss, or a challenge (Lazarus and Folkman, 1984). An individual’s coping with an issue seems to largely depend on his/her appraisal of the specific situation (Aldwin, 2007; Chronister and Chan, 2007). The qualities attributed to an event (e.g. positive, negative or challenging) tend to determine the selection of coping strategies. In fact, Lazarus and Folkman (1984) supported the premise that an individual’s appraisal of the situation is more central for choosing coping strategies, rather than the situation itself. This assumption seems to have certain implications with regard to the voice of the participants in research.

Consistent with the dimensions discussed above are a number of models of coping. Pearling and Schoolers (1978) identified three types of coping: 1) Responses that modify the situation and are interested in altering the source of strain, including negotiation, optimistic action, self-reliance versus advice-seeking, exercise potency versus helpless resignation. 2) Responses that control the meaning of the problem to cognitively neutralise the threat including positive comparisons, selective ignoring and substitution of rewards. 3) Responses that help the individual manage stress after it has occurred including emotional discharge, self-assertion, passive forbearance. Similarly Billings and Moos (1981) developed their model of coping, with emotion-focused coping being interrelated to the avoidance orientation of coping and problem-focused coping including two dimensions: active behavioural coping and active cognitive coping. Their work then evolved into a three-dimensional classification which apart from the traditional categories of problem-coping and emotion-coping, took under consideration the appraisal-focused orientation of coping. Finally (but not lastly), a similar conceptualisation of coping was characteristic in the work of Endler and Parker (1990;1994) which included three dimensions: (a) task-oriented coping, (b) emotion-oriented coping and (c) avoidant-oriented coping. Their model was concerned with the
complex and multidimensional relationships among personality and situational/environmental and behavioural factors.

Reflecting on different works regarding the classification of coping strategies, Sugarman (2001) adopted a slightly different perspective. She claimed that categorising a specific coping strategy as serving a particular function can be considered arbitrary, since a specific coping response can possibly serve more than one function or have different impact over time. However, she mentioned that whilst deferent researchers tend to group coping strategies in different - sometimes overlapping - categories, four goals can be identified directed at the environment and the individual:

‘Environment (or situation) focused coping, by:
– modifying the situation and thereby the demands it makes on the individual, for example, negotiating a change in job specification, rescheduling payment of bills,
– escaping from or avoiding the situation - for example, walking out of a stressful relationship, not accepting additional responsibilities at work.

Person (or self) focused coping, by:
– developing additional coping strategies or personal resilience, for example, attending classes in yoga, relaxation, or assertiveness; developing new support systems,
– altering the way the situation is perceived and assessed, for example, cognitive restructuring in order to challenge unrealistic expectations or irrational beliefs.’ (Sugarman, 2001, p.153)

According to Sugarman, (2001) solely environment-focused coping strategies act directly so as to alter or modify the situation that makes the demands and eliminate the source of life strains. Although, environment-focused coping modes represent the most direct way of coping, such actions comprise the minority of coping responses (Pearlin and Schooler, 1978). Conceptualising the environmental coping mode as a direct coping response possibly reflects traditional understandings of coping which support task-focused coping as being more ‘adaptive’ and ‘effective’ than emotional-focused coping. Similarly, avoidance coping modes have been widely perceived as ‘non-adaptive’ because they do not act directly to eliminate the problem. However, such strategies may be beneficial by contributing to the maintenance of emotional balance under unchangeable and uncontrollable situations (Mattlin et al., 1990; Aldwin, 1994; Zeidner and Saklofske, 1996). At this point, it seems important to explore a bit further the issue of ‘effectiveness’.
Within the microanalytic level coping effectiveness is not a straightforward concept, since it seems to depend on temporary and contextual factors. Microanalytic models have benefited from a large number of empirical studies (Chronister and Chan, 2007), but due to the contextuality of such projects, it seems highly perplexing to come to certain conclusions about the effectiveness of specific coping responses (Somerfield and McCrae, 2000). The dynamic nature of coping as a process also seems to affect the attempts to determine the effectiveness of coping responses. Research has suggested that in a typical coping process people tend to use different strategies at different stages of the coping process (Folkman and Lazarus, 1980; 1985) and what may be considered effective at the beginning of a stressful situation may be less effective or even inappropriate as time passes (Chronister and Chan, 2007). Similarly, Folkman and Moskowitz (2004) suggest that a coping strategy may be successful in one situation but not in another. Although problem-focused coping is traditionally considered in western values as more ‘adaptive’ than emotion-focused and avoidant-focused coping (Billings and Moos, 1981; Dusenburg and Albee, 1988; Folkman et al., 1986; Sarason, 1973; Sarason and Sarason, 1981 in Chronister and Chan, 2007), effective copers seem to use both problem and emotional coping modes. This underscores the inadequacy of macroanalytic bipolar conceptualisations (Folkman and Lazarus, 1985). Research has also suggested that emotion-focused coping tends to be more stable because it is subject to personal characteristics, while problem-focused coping seems to be contextually variable, implying that problem-focused coping is particularly responsive to situational factors (Folkman and Moskowitz, 2004). Thus, no coping strategy contains magic; rather, ‘effective coping means flexible utilisation of a range of strategies as each situation demands’ (Schlossberg et al., 1995, p.74).

This highlights the need to evaluate coping effectiveness having under consideration three key features, as identified by Lazarus and Folkman (1984): firstly, coping is dynamic in nature and process oriented implying that the notion of effectiveness can be altered in relation to the chronic stage or qualitative elements of the situation as the encounter unfolds. Second, coping has situational meaning in that it depends on the characteristics of the specific situation, the available resources and the person’s appraisal of the particular demands. As a result it seems important to evaluate the success of coping strategies and design certain goals in relevance to the context in which the problem occurs (Zeidner and Saklofske, 1996). Third, the effectiveness of
coping strategies is more relevant to the individual’s efforts to manage demands - whether or not these efforts are ‘successful’- rather than value judgments and suppositions about what constitutes efficient or inefficient coping as determined by outside observers (e.g. parents or specialist teachers).

Conceptualising coping as being process-oriented and focusing on personal efforts, contrasts with the common understanding of coping in terms of its outcomes. The traditional view of effectiveness judges certain strategies as ‘good’ or ‘bad’, ‘success’ or ‘failure’, engagement’ or ‘disengagement,’ and eventually certain people as ‘coping’ or ‘succumbing’ (Robinson et al., 1995). However, such a view seems to comprehend coping effectiveness in terms of extremes, opposites, and to provide little understanding of the coping complexities (ibid.). Personal coping is compared to some arbitrary standards that determine ‘where the person should be or what coping abilities should be manifested’ (ibid., p.12), whilst minimal interest is given to individual differences in terms of personality, goals and coping effort. For instance, teachers, parents or other professionals tend to judge the effectiveness of a dyslexic student’s coping strategies according to standards such as marks or where the child stands in comparison to his/her peers or the arbitrary constructs of literacy attainment levels. No matter if the child puts in extreme efforts in reaching the expected literacy levels, if the outcome is not the desirable one, the student’s coping strategies are judged as ‘bad’ or ‘inadequate’. Therefore, it is suggested that the effectiveness of coping strategies needs to be separated from externally judged outcomes and evaluated in terms of personal efforts, goals and expectations as these are expressed by the individual. In fact, judgments of coping effectiveness coming from external sources and focusing on coping outcomes may further complicate the already complex task of coping (ibid.). This of course raises questions about the traditional perception of the ‘effectiveness’ of certain intervention programmes.

According to Robinson (1995) apart from conceptualising coping effectiveness as process-oriented, contextual and with relevance to personal efforts, a drastically new view of coping should incorporate life’s ups and downs and accept temporary setbacks as normal and inevitable in the coping process. In this sense, it suggests that effective coping includes the active decision not to attempt to cope at some times, preferring a temporary respite (ibid., p.12-13). Lazarus (1999) also suggested that traditionally ‘disengaging’ strategies such as denial may prove effective for certain individuals under
certain situations (e.g., when nothing can be done to change a situation) and in this sense, all strategies may be considered as equally able to promote ‘alternative engagement’.

**Interactionist approaches**

Although providing a new perspective, microanalytic approaches have been criticised for limited validity and generalizability due to their contextual focus. Moreover, as Knohne (1996, p.385) suggests, microanalytic coping approaches lack theoretical foundations and ‘in general, no theoretically intelligible deduction of coping strategies is presented’. Additionally, the relationships between these arbitrarily defined coping strategies usually remain unclear. In response to these criticisms Krohne (1993; 1996) developed a hierarchical structure of coping which differs from the previous in that it incorporates understandings of coping both at a personality trait level and at a contextual process level. Krohne (1996) organised coping in a hierarchical manner within which *macroanalytic orientation* constitutes a higher level, more fundamental construct and consists of trans-situational and stable personality coping formulations. *Microanalytic orientation* refers to situational and process coping efforts which are incorporated at a lower level (see Figure 2). According to this taxonomy the wide variety of specific coping strategies from the microanalytic level can be exalted to the higher macroanalytic level of abstract and fundamental constructs of coping.

More specifically, the hierarchy clusters behavioural level-specific microanalytic coping efforts (acts and reactions) into broad conceptual level macroanalytic coping (strategies and superstrategies). Coping strategies that reflect a middle level of abstraction and focus on conceptually-coherent groups of coping reactions (e.g. denial, confrontation, distancing, seeking social support) can be categorised into higher order dispositional superstrategies (e.g. vigilance, approach, monitoring or blunting). At the same time coping strategies manifest themselves in coping acts and reactions that operate at a lower level of abstraction and focus on situationally-influenced specific coping behaviours (e.g. specific items on coping measures). It can be seen as an advantage that although the majority of coping researchers tend to operate within an ‘either-or’ mode focusing solely on one level of coping (Chronister and Chan, 2007), Krohne’s hierarchical model suggests a move away from reductionist traditions towards an interactionist model that supports the incorporation of both personal and situational...
aspects of coping. Some may also argue that the model has transactional elements. However, despite mentioning an interaction between different levels, Khoohn (1996, p.384) argues that the macroanalytic level consists of ‘more fundamental constructs’, whilst transactional approaches claim that there are mutual interrelationships between self and environment which change the nature of the involved agents. Finally, although Krohne’s hierarchical model offers a comprehensive outline of coping, according to Chronister and Chan (2007) it is still a parsimonious view.

Figure 2: Krohne’s (1993) hierarchical model of coping.

Transactional approaches

So far coping has been conceptualised within reductionist approaches that either focus on a macroanalytic person-based level (person → coping) or microanalytic situation-based level (situation → coping) (see Figure 3). The interactionist approach promotes a cooperation of the two factors and takes the form: person + situation → coping (Aldwin, 2007). Although interactionist approaches seem to be more holistic in comparison to reductionist approaches, from a transactionist point of view, ‘dualist-interactionist models are incomplete because they imply that two agents are mutually creating a phenomenon but nonetheless remain independent and unchanged’ (ibid., p.5). Moreover, they do not provide opportunities for observing coping as an ongoing process that stems from the interplay between the agents (Lazarus and Folkman, 1984). ‘In contrast to a unidirectional, static, antecedent-consequent model, the transactional model views the person and the environment in a dynamic, mutually reciprocal, bidirectional relationship (ibid., p.293). A key feature though that differentiates transactionist from interactionist approaches is that in transaction, personal and environmental features that interact are not independent; rather, they are joined together,
mutually affecting each other within and across levels and forming a new relational meaning (ibid.). In this sense, a new identity is created which is different from the sum of the parts (ibid.). ‘The independent identities are lost in favour of the new condition’ (Lazarus and Folkman, 1987, p.142).

Moreover, in transactional models feedback occurs at all levels. For example, although environment has been mainly perceived as a source of stress or a source of support for coping within interactionist approaches, from a transactionist point of view the effect of individuals’ coping on environment needs to be considered too (Lazarus and Folkman, 1984; Aldwin, 2007). Personal coping strategies do not have implications solely on the immediate problem but also on the cultural repertoire of coping strategies (Alwin, 1985). Finally, transaction implies change. ‘The person, situation and coping mutually affect one another in a process that evolves over time’ (Alwin, 2007, p.99). Traditional understanding perceives self and environment as static phenomena, still photos. From a transactionist view though the entities (self, environment, coping) change in the course of time and due to their dynamic interactions the whole system of the new entity changes too.

![Figure 3](image.png)

**Figure 3: Comparison of different approaches of coping.**

Perhaps the most famous transactional model of stress and coping has been proposed by Lazarus and Folkman (1984). According to the model, coping emerges from the
dynamic interactions between the person and the environment and as a function of the process of appraisal. Appraisal is a cognitive evaluative process that determines to what extent a transaction between the person and the environments is stressful and potentially threatening for the person’s wellbeing demanding coping, and it is further divided into three types. Primary appraisal constitutes an evaluation of the significance of a transaction or an encounter as being irrelevant, benign-positive or stressful, for an individual’s wellbeing. Stressful appraisal can take the following forms: harm/loss (e.g. recognition that some sort of damage has been sustained), threat (e.g. anticipation of some sort of harm) and challenge (e.g. evaluation of some potential gains inherent in the encounter). If individuals have a stake in the transaction, a secondary appraisal will occur to define what can be done (e.g. evaluation of available coping options or the benefits and consequences of altering the perceived stressor). Finally, reappraisal refers to a feedback process based on new information obtained from the environment and/or person during the transaction. According to the model, coping strategies are selected through the processes of appraisal.

Within traditional understandings coping is only required when events are perceived as stressful (Devonport et al., 2008) whilst benign or positive appraisals do not demand coping responses (Anshel and Delany, 2001). Interestingly although all models of coping theorise and explain the issue from different viewpoints, they all seem to share the same understanding of coping as a response to an appraised ‘problem’ that generates inconvenience and stress. Self-based models of psychoanalytic nature define coping as ego-defences against distress; self-based models of the macroanalytic level perceive coping as personality traits that appear in reference to a stressor; situationally determined definitions of the microanalytic level comprehend coping as process-oriented efforts that deal with a stressful situation and interactionist models promote coping as the outcome of the interrelations between self and environmental factors, again in relation to a stressor. Therefore, although the models differ in the way they define coping, they all see it as a response to a problem-stressor that needs to be altered or remedied. In this sense, they all adopt a pathologising perspective towards coping. In fact, the study of coping emerged within the clinical discipline as an attempt to develop rehabilitation strategies for those suffering (Martz and Livneh, 2007). Conventionally, disability is considered responsible for the creation of major life stressors and so, identifying which coping strategies are most effective in regard to acceptance or adjustment seems to be important (Chronister and Chan, 2007, p.66). Therefore, coping
is important solely in terms of eliminating the inconvenience caused by an antecedent stressor. However, this view of coping being closely related to problems can be limiting because it focuses on the negative aspects of life events whilst neglecting that even non-distressful situations demand some kind of coping skills. This form of ‘daily coping’ may be less evident but turns out to be equally important. Even early work within transactional understanding failed to acknowledge this form of coping. In fact, Lazarus and Folkman (1984) made a distinction between automatised adaptive behaviour (well-established effortful responses) and coping, restricting the latter to responses exceeding a person’s responses and demanding additional effort.

However, in their later work Lazarus and Folkman (1987) replaced the concept of stress with the notion of emotion because stress focuses solely on negative responses (e.g. fear, anger, guilt, shame) whilst emotion includes both negative and positive responses (e.g. happiness, pride, love, relief). This movement signifies a shift of perspective from problem-oriented coping to more general understandings of coping as efforts that people make on a daily basis to deal with the demands of life which may include difficulties followed by subsequent stress but may as well incorporate efforts to respond to tasks that do not emerge as inconvenience. In this sense, dyslexia can be seen as a ‘situation’ or an ‘event’ in one’s life rather than a problem; not at least before the individual defines it as a problem. In this way, traditional perceptions of dyslexia, which support inevitable and definite associations about dyslexia as a disability, academic failure and negative self-concept, seem to be challenged. In fact, literature review suggests this link is neither obligatory nor crossover (Burden, 2008). It is striking that so far research on dyslexia and coping has mainly operated within a framework that sees dyslexics as being stressed or having negative self-perceptions, whilst neglecting cases of dyslexic individuals that may face literacy difficulties but for whom dyslexia is not a problem (Riddick, 1996).

The dominancy of the pathologised perception may stem from the fact that the vast majority of research in developmental psychology has been concerned with the investigation of ‘patterned and orderly change across time’ (Gergen, 1977, p.38), and with presenting such change as a series of hierarchical stages (e.g. stages of biological maturation). Under this perspective dyslexia is usually perceived as a developmental delay/dysfunction in reading and writing. However, there are alternative perspectives towards life development, ‘problems’ and coping. Instead of looking for patterns and
structured stages in life-span development, *life course as chaos* focuses on how we cope with disorder (Sugarman, 2001). In this view, the ‘precise character’ of life-span development relies on a variety of environmental factors (e.g. economic, social, political and geographical) which make the development neither universal, nor invariant. As Sugarman (2001, p.72) puts it, ‘acceptance of the role of chaos or chance in determining the “precise character” of our life implies that life-span developmental psychology cannot hope to produce a definitive and everlasting picture of the life course… It must accept that any account can represent at best a temporary truth’. As a result of focusing on chaos perspectives, search is primarily concerned with the exploration of processes of dealing with the unpredictable. In fact, work on coping with chaos in life has been done within the recent body of *psychosocial transition* (Parkes, 1971).

**Coping with Transitions**

The transitional perspective examines coping with life-events entailing change (Schlossberg et al., 1995). ‘A transition, broadly, is any event or non-event that results in changed relationships, routines, assumptions, and roles’ (Goodman et al., 2006, p.33). Life events are benchmarks in the human life. They give ‘shape and direction to the various aspects of a person’s life’ (Danish et al., 1980, p.342). If that is the case, it seems intriguing to stand outside of traditional research approaches and endeavour to explore dyslexia as a life event examining the life changes that it may cause in terms of routines, relationships and roles. As Goodman et al. (2006) mention, a transition may involve gains as well as losses, obvious life changes but also subtle changes (e.g. non-occurrence of anticipated events). In any case what matters is the individual’s perception of the event and the change. ‘A transition is a transition only if it is so defined by the person experiencing it’ (ibid., p.33). The same event seems to have different meaning for different individuals. In this sense, dyslexia may be an important event for some dyslexics whilst for others it may be irrelevant or unimportant. Moreover, it is not the event or the non-event itself that is important but the degree to which it impacts on the individual’s daily life (ibid.). Finally, it should be stressed that transition involves change and so it implies a process of transactional nature. ‘While transition may be precipitated by a single event or non-event, dealing with a transition is a process that extends over time’ (Evans et al., 2010).
In line with such understandings towards transition, Schlossberg et al. (1981; 1984; 1989; 1995) developed a theory which aims to facilitate understandings about adult transitions and help coping with ordinary and extraordinary life processes (Evans et al., 1998). Schlossberg transition theory has three parts: approaching transitions, taking stock and taking charge (Goodman et al., 2006).

More specifically, approaching transitions refers to the nature of the transition (e.g. an anticipated or unanticipated event or nonevent) and the process of the transition. In transitional interactional models, time is a key feature. ‘Reactions to any transition change over time, depending on whether one is moving in, through or out of the transition’ (ibid., p.32). People who move into a new situation need ‘to become familiar with the rules, regulations, norms, and expectations of a new system’ (Schlossberg, 1996). Once people ‘know the ropes’, moving through the process begins during which ‘adults confront issues such as how to balance their activities with other parts of their lives and how to feel supported and challenged during their new journey’ (Goodman et al., 2006, p.49). Moving out refers to the ending of a transition and can provoke feelings of grief. Moreover, approaching transitions includes the context (that is the relationship of the person to the transition and the setting) and the impact of the transition on one’s life. The impact of an event can be more important than the event itself (ibid.). The more a transition alters an individual’s life, the more coping resources it demands, and the longer it takes for adaptation (ibid.). In this sense, it seems interesting to explore the degree to which dyslexia influences the daily life of dyslexic adults.

Taking stock refers to four major sets of factors ‘that influence the individual’s ability to cope during a transition’ (Schlossberg et al., 1995, p.47). The 4 S System takes into consideration the situation itself, the self (the people undergoing the transition), the support (the social and material resources available), and the strategies (coping responses as opposed to coping resources) (see Figure 4). The four sets of factors are in constant communication with each one informing the others and all of them evolving over time. Individuals’ coping depends on their resources in these four areas. The framework is in line with the rejection of the degree-of-impairment model in favour of one that recognises that we all have multiple assets and resources as well as multiple liabilities and limitations (Fiske and Chiriboga, 1990). Therefore coping effectiveness can be best explained within a framework of a balance of opposing forces, rather than as unambiguously ‘good’ or ‘bad’ (Goodman et al., 2006). Since people differ in terms of
liabilities and available resources, the 4 S system may partially answer why different individuals cope differently with the same transitions and why the same person copes differently at different times (ibid.). The role of personal appraisal is also acknowledged as central. In fact, Goodman et al. (2006) discuss appraisal based on Lazarus and Folkman’s (1984) theory of primary and secondary appraisal.

Regarding the first ‘S’, Schlossberg et al. (1995) claim that every individual has a unique ‘situation’ which is likely to vary because of the influence of eight dimensions:

1. **Trigger** is the specific event or nonevent, anticipated or unanticipated that set off the transition altering one’s life. Trigger can be internal (something that happens to the individual) or external (something that happens to someone close to the individual). Aslanian and Brickell (1980) claim that a trigger is a specific event but it may not be necessarily related to the nature of the transition. It is not the event per se that matters but rather the individual’s appraisal.

2. **Timing** refers to the transition in relation to the social norms and the personal life stage. Most people have ‘built-in social clocks that are their barometers to judge whether they are “on time” or “off time” with respect to family, career, and self issues’ (Goodman et al., 2006, p.61). To be off time, whether early or late, can make

![Figure 4: Coping resources – the 4 S's (adapted by Goodman et al., 2006, p.56)](image-url)
individuals feel uncomfortable. Thus if a child by the age of ten cannot read fluently or spell basic vocabulary correctly s/he is considered to be ‘off time’ possibly due to some kind of developmental delay which can make students feel uncomfortable. Moreover, events can also occur at better or worse times, making them relatively easier or harder to manage.

3. **Control** is concerned with which aspects of the transition the person can regulate. The source of a transition can be internal (a deliberate decision by the individual) or external (imposed on the individual by external or unanticipated factors). Even if a transition is beyond an individual’s control the individual’s response to it can be at least to some degree within his/her power.

4. **Role change** examines whether the individual has experienced a role change such as role gains and role losses (Fiske and Chiriboga, 1990). ‘Many but not all transitions involve role change.’ (Goodman et al., 2006, p.62) Moreover they may vary in the degree to which they are accompanied by normative social expectations concerning how to behave (Zalenznik and Jardim, 1967).

5. **Duration** refers to the length of the transition. The expected duration of the transition influences the degree of ease or difficulty of assimilating the situation. Goodman et al. (2006) suggest that a change which is regarded as long-lasting will be perceived very differently from one that is viewed as short-term. Moreover an unpleasant transition may be more easily borne if the individual is assured that it is of limited duration and that the discomfort is temporary.

6. **Previous experience with a similar transition** is also perceived as a factor influencing coping. Generally, ‘the individual who has successfully weathered a particular kind of transition in the past will probably be successful at assimilating another transition of a similar nature’ (ibid., p.64), and the opposite.

7. **Concurrent stress** refers to the possibility of the individual experiencing stress in other areas of life, beside the main stressor that triggered the transition. Moreover, it is suggested that sometimes a transition may stimulate stressors of transitions in other areas as a snowball effect (ibid.).

8. **Assessment** refers to the individual’s views of who or what is responsible for the transition and their appraisal of the situation (e.g. positive, negative or benign appraisal) (ibid.).

The second element of the 4 S system is ‘self’ and refers to what people bring to the transition in terms of ‘who they are’ (Schlossberg et al., 1995). Although certain
environmental demands produce certain pressures in substantial numbers of people, individual differences in the degree and the type of reaction are always evident because people differ in terms of sensitivity, interpretations and reactions to events (Lazarus and Folkman, 1984). For instance, under comparable conditions one person responds with anger, another with depression, yet another with anxiety or guilt, and still others feel challenged rather than threatened. Thus, besides the situation it is important to see coping in relevance to what the individual brings to the transition in terms of personality and individual characteristics. Schlossberg et al. (1995) refer to personal, demographic (e.g. socio-economic status, gender, ethnicity/culture, age and stage of life, health) and psychological characteristics. Psychological resources are the ‘personality characteristics that people draw upon to help them withstand threats’ (Pearlin and Schooler, 1978, p.5) such as ego development, self-efficacy, style of processing the world (e.g. intuition, senses and logical processing), commitments and values (priorities and meaning of life: e.g. relationships, work, self-improvement, self-enjoyment or social service) spirituality and resilience (Goodman et al., 2006).

The third factor of the 4 S system is environmental ‘support’. Support ‘comes in many sizes and shapes and can be for better or for worse’ (ibid., p.75). According to Goodman et al. (2006) support can stem from different sources such as intimate relationships, network of friends, family units and organisations and serve different functions (e.g. aid, affirmation, honest feedback and affect).

Finally, while ‘self’ refers to what individuals bring to the transition by virtue of who they are and the ‘support’ variable relates to the environmental resources that are available, strategies refer to coping responses; what people actually do (Pearling and Schooler, 1978). Discussing strategies, Goodman et al. (2006) endorsed Lazarus and Folkman’s (1984) two major coping orientations (emotion-focused and problem-focused coping) and four possible modes (information seeking, direct action, inhibition of action and intrapsychic behaviour), as well as Pearlin and Schooler’s (1978) categorisation of coping: responses that modify the situation, responses that control the meaning of the problem and responses that attempt to manage stress in the aftermath. Moreover it was emphasised that people have a range of coping strategies and responses which can normally be expanded or used more effectively and that individuals who cope effectively demonstrate flexibility and use multiple methods.
The examination of the 4 S’s enhances understanding about how adult learners cope with life changes (Kotewa, 1995). Initially, resources in terms of assets and liabilities that seem to affect the transition are examined and then a strengthening of the 4 S’s resources takes place (ibid.). In fact, the third part of taking charge refers to the process of discovering how to strengthen the areas of weakness and use (new) effective coping strategies. Since transition theory comes originally from the counselling discipline, its initial purpose is to intervene in the transition and help the individual. Taking charge is intended to give suggestions from a counsellor’s perspective so as to help the individuals who go through a transition to expand their coping resources (Goodman et al., 2006). Intervention techniques for facilitating transition may stem from individual counselling, group counselling or other means (ibid.).

![Diagram of the individual transition](image)

Figure 5: The individual transition (adapted by Goodman et al., 2006, p.33).

Although intervention is out of the scope of the present study, the notions of ‘approaching transition’ (e.g. nature, context and process of transitions) and the taking stock (the 4 S’s) seem to provide a rich, dynamic framework for exploring coping away from pathologising conceptualisations. As can be seen in Figure 5, transition can occur from any event/non-event appraised by the individual as important. More significantly though, coping is a process that evolves over time depending on the dynamic and complex interrelations between multiple factors of the 4 S’s. Therefore, transition theory is in line with Folkman and Moskowitz’s (2004) suggestion that coping is a complex, multidimensional process that is sensitive to both the environment and to
personality dispositions, which influence the appraisal of a strain and the resources for coping. Since coping is not a single, linear or unidimensional factor, simple categorisation of coping modes under overlapping labels such as those developed within the macroanalytic and microanalytic levels - no matter how useful it may be - can receive criticism on the basis of being limiting, reductive or even inadequate. Coping strategies are probably better understood within a broader context that takes into consideration multiple, interrelated factors such as the individual, the context and the situation.

Therefore, a major strength of Schlossberg’s transition theory is that due to its holistic, dynamic framework it constitutes an ‘excellent model’ (Evans et al., 2010, p.225) and a great analytical tool for understanding an individual’s situation (Summers, 2002). ‘The framework is comprehensive in scope, highly integrative to other theoretical contributions, and conceptually and operationally sound.’ (Evans et al., 2010, p.225) It provides ‘a solid foundation for practice that is responsive to both commonalities and idiosyncrasies” (Evans et al., 1998, p.122). Besides the interventional level, the above statement means that the theory allows people to be treated as individuals since it articulates that transitions are handled in completely different ways from person to person (Santiago, 2004). The model places great emphasis on the individual’s perspective, allows for the integration of personal and cultural differences (Evans et al., 2010) and enables research of diverse populations (ibid.). Although the literature has supported the utility of Schlossberg’s models for practice, research in supporting its validity is scant (ibid.). Therefore, Evans et al. (2010) encourage the expansion of research attempts with diverse populations such as individuals with disability. Both qualitative and quantitative research is needed but ‘qualitative research might present a better place to start in that transitions could be viewed holistically, as perceived by individuals experiencing them’ (ibid., p.226).

C. Conclusions from dyslexia and coping theories

To sum up, both dyslexia models and coping models represent different perspectives of the same issue and therefore, they are neither true nor false (Frankfort-Nachmias and Nachmias, 1992). They all entail certain strengths and weaknesses and none can be condemned as useless or praised as ‘solid gold’. What is perhaps interesting is that
although the fields of coping and dyslexia differ in nature, conceptual models seem to follow similar patterns: in-person understandings paved the way for environmental/situational understandings which were subsequently followed by interactionist understandings (see Figure 6).

**Figure 6:** Similar patterns in models of coping and dyslexia.

Although the evolution of coping theories has taken one step further towards transactional understandings, the dyslexia discipline has ‘stuck’ to reductionist and interactionist approaches. If though, as was suggested above, these approaches are problematic in certain ways, a question emerges: Would the dyslexia field benefit from an alternative perspective such as the transactional orientation? Or, in other words, could the transactional model provide an efficient understanding of dyslexia and contribute to the field? It appears that the non-pathologising, holistic, dynamic and complex approach of the transactional model could provide useful insights into the notion of dyslexia. More specifically, Schlossberg’s theory could perhaps offer a useful analytical tool for the exploration of dyslexic individuals’ coping efforts on a daily basis from an alternative, novel and quite promising perspective. Needless to say, so far no
research project has attempted to investigate the phenomenon of coping with dyslexia from a transactional perspective, possibly due to the limited literature in the field, as will be suggested below.

D. Research on coping strategies and dyslexia

The disciplines of coping and dyslexia have rarely met so far, and therefore literature on this topic is limited. Researchers have been concerned with the exploration of the ‘identification of dyslexia and remedial education more than how such children were dealing with their difficulties’ (Alexander-Passe, 2008, p.13). However, the term ‘strategies’ is present in the dyslexia literature, but it is usually associated with systematic instruction and learning approaches for acquiring literacy and numeracy. Brozo (1990) reports an outgrowth of research on the specification of the characteristics of quality and effective instruction strategies. Textbooks for teachers, parents and professionals seem to perceive strategies mainly in terms of intervention, teaching approaches and instruction techniques that facilitate literacy skills. For instance, Farrell (2006) sees strategies as effective teaching interventions concerning difficulties related to dyslexia and looks at a sample of programmes focusing directly on reading, writing and spelling (e.g. textHELP, Inspiration, Clicker, Wordshark). Similarly, Chivers’s (2001) book Practical Strategies for Living with Dyslexia mentions a wide range of teaching programmes (such as multisensory teaching methods, phono-graphix and computerised software) that can be used by practitioners and dyslexics to acquire literacy skills. Stirling (1989) published a paper on strategies for spelling aiming to provide the dyslexic adolescent with ‘tools’ to cope with spelling requirements both in school and outside. Similarly, in his book Dyslexia: a practitioner’s handbook Reid (2009) refers to strategies for supporting literacy as well as learning and memory. Therefore, within this perspective strategies equal instruction tools.

Secondary to the conceptualisation of strategies as instructive tools comes the notion of strategies as learning and study approaches acquired by students. For example, a study by Kirby et al. (2008) explored the learning strategies and study approaches of dyslexic students. The findings suggested that in comparison to their non-dyslexic peers, dyslexics reported significantly greater use of study aids, time management strategies and a more concerted effort in their approach to learning. Although this topic has been
studied extensively for typically achieving students (e.g. Biggs, 1987; Entwistle and Ramsden, 1983), little is known about dyslexics.

In fact, there have been criticisms of conceptualising and researching coping strategies mostly under an instructional standpoint related to teachers’ effectiveness, materials and assistive technology, whilst ignoring students’ perspectives on what works for them; their personal coping strategies (Bloome, 1984; Davidson, 1985). Oliver (1981) has criticised much of the academic research on disability on the grounds of reflecting the agenda of the academics, psychologists and educationalists and has argued for the need for the voices of disabled people to be heard, so that they set their own research agenda. Moreover, Brozo (1990, p.324) claims that teachers who focus on effective instruction from only their own perspectives fail to appreciate the needs of unsuccessful readers and may inadvertently reinforce students’ reading failure. Further, ‘the so-called effective teaching guidelines are useful only to the extent that students are actually engaged in teacher-directed tasks’ (Brozo, 1990, p.324). So, the issue is whether students’ coping strategies and teachers’ perceptions of coping strategies as prescribed by the policies of the national curriculum coincide or differ and what may be the implications of this relationship. In the case of the Greek educational system, this issue tends to have increased interest due to the lack of a coherent policy designed to accommodate the needs of dyslexic students. ‘Oral examination is the only legally and educationally recognised provision offered to pupils with dyslexia in secondary and tertiary education. No other official accommodations are offered’ (Stampoltzis and Polychronopoulou, 2009, p.309-310).

Apart from the instructional perspective, the issues of coping and coping strategies in the field of dyslexia have also been explored as a part of some research projects that were conducted within the psychological discipline and explored notions such as self-esteem, academic failure, stress, learning approaches, etc.

For instance, Singer (2007) conducted a study with 60 dyslexic Dutch students between 9 and 12 years old that explored the strategies students developed to cope with academic failure and protect self-esteem based on a correlation of the theories of James (2001) and Cooley (1902). Three hypotheses were formed and were confirmed by the findings: Students with dyslexia had as a primary goal the protection of their self-esteem. Dyslexic students coped with academic failure using four strategies: 1) working hard to
raise the level of competence to meet the standards, 2) lowering their academic standards to meet the level of their actual performance, 3) seeking positive support from significant others, and 4) avoiding comparison with significant others. The third hypothesis, expected that children will lie within two profiles: one focusing on hard work so as to meet standards and another focusing on hiding poor performance. However, two more profiles were found: the first focused on both working hard and hiding poor performance whilst the second focused on feeling good and seeking support from parents, teachers or peers. In terms of methodology the interviews with the students consisted of discussing an imaginary situation in which the child is confronted with academic failure. However, starting from the premise of academic failure as a research method seems to entail a methodological and possibly an ethical issue because it takes for granted, and projects the view of, dyslexics being most commonly failed and having low self-worth. Facing difficulties though, does not exclude the possibility of being successful and having a positive self-concept. A review of the existing literature by Burden (2008) revealed that contrary to what is commonly believed dyslexia is not necessarily associated with negative feelings of self-worth. Consequently, it is quite possible that if the same method of exposure to failure was used to interview a non-dyslexic group of students, the same or similar coping strategies may have been reported.

More consistent work in the field has been made by Alexander-Passe (2004; 2006; 2009). In a qualitative study with 19 dyslexic teenagers between 15-17 years old, Alexander-Passe (2004) explored whether they cope and if so, which coping strategies they used in relation to stress caused by the school curriculum. He found that the majority used avoidance strategies (e.g. writing less, putting off writing essays, avoiding writing words with difficult spelling, losing homework books) as a main coping strategy. Nevertheless, many dyslexic teenagers excelled in non-academic subjects (e.g. sports, music) and used their superiority over their peers to enhance their self-esteem.

In a later study Alexander-Passe (2006) explored coping strategies as part of research into how 19 dyslexic teenagers (12 male and 7 female) cope in terms of self-esteem, coping and depression. Coping strategies were studied in five areas using Endler’s and Parker’s (1999) inventory. The Coping Inventory with Stressful Situations (CISS) examines coping with stress in 1) task-orientated strategies, 2) emotion-orientated strategies, 3) avoidance-orientated strategies, 4) distraction strategies (include doing
tasks to distract you from other tasks) and 5) social diversion strategies (e.g. avoiding situations where literacy will be tested). Results strongly suggested gender differences, with females using more emotional and avoidance-based coping strategies and males using more task-based coping. Although ‘coping’ is just one of the interests of the research, it is still questionable how appropriate it is to use ‘coping’ and ‘coping with stress’ as synonyms and employ an inventory related to stress to explore the coping for dyslexics. Similar to the previous research, there seems to be a methodological and an ethical issue, due to conducting research from a disabling standpoint that sees dyslexics as stressed or depressed (at least in relation to their dyslexia).

In a subsequent article Alexander-Passe (2009) refers to a study with a unifying framework that employed three different methodologies: 1) a quantitative study that used a battery of measures about how dyslexics cope; 2) a qualitative study that used interviews to understand coping based on the participant’s perspective, and 3) an experimental quantitative study that examined a screening measure for parents’ ability to identify their child’s coping strategies. A sample of 26 (17 male and 9 female) dyslexic teenagers was recruited and volunteers were sent a study pack with the standardised measures and the experimental interview script with an audio tape to record replies. The CISS test for stressful situations was again chosen for measuring coping strategies and results again suggested gender differences. Females used predominantly emotional-oriented coping followed by average use of avoidance and task-oriented coping, whilst males ‘coped well’ with dyslexia using a combination of task and emotional-oriented strategies. Qualitative interviews were returned by 18 volunteers (out of the 26), some of whom omitted certain parts. Interviews were initially analysed as single case studies building individual profiles and then thematically as a cross-case analysis. Results suggested several difficulties affecting school, home and social life and causing feelings of stress and frustration. Avoidance was noted as a key coping strategy. Moreover, excellence in non-academic areas and hobbies played a significant role in self-esteem. Finally, the experimental measure was validated based on a sample of 21 parents. Results showed that parents were able to identify all three factors (not avoiding, not trying and feeling good) and that gender is a significant variable whilst age is not.

While this study is identical in methodology and results with the previous studies, Alexander-Passe (2009) does not make a clear reference or comparison to the results of
the previous publications. Therefore it is questionable if the 2009 article reports a new research project or if it is an attempt to provide a unifying framework that includes the research reported in previous publications (Alexander-Passe, 2004; 2006). The multi-method design is definitely an advantage of the study. However, the criticisms about the use of a coping with stress measure are valid here too. In fact, Alexander-Passe (2009, p.70-71) mentions in the limitations of his study that ‘the measures chosen were developed in relation to the empirical review and usage by other researchers in the field… Whilst they are respected validated measures, any conclusions must be taken with caution’. Similarly, results from the parental questionnaire should not be taken as absolute because it was an experimental measure and there were no norm data to refer to.

Although tests, inventories and measures are widely used in research, they can actually tell us very little about a particular individual because they tend to limit the exploration of a phenomenon to certain perspectives - those of the author/researcher or the test- constructor - while ignoring other perspectives/factors which may be crucial for a certain individual in a certain situation. Burden (2008), referring to self-esteem measures, claims that tests and statistical relationships can be misleading and suggests we find ways of more in-depth investigation of phenomena before drawing conclusions. Therefore, it seems that more flexible and qualitative designs are appropriate to investigate the coping efforts of individuals with dyslexia more holistically, in-depth and without the risk of imposing the researcher’s external perspective on the phenomenon.

Moreover, Alexander-Passe (2009) refers that the N=26 was small in size and this may influence the stability of the results. A larger sample might have highlighted different factors. Finally, ‘all the studies were postal in nature and there is no actual confirmation the person named completed the questionnaires or took the audio interview’ (ibid., p.71). Despite having certain limitations Alexander-Passe’s work constitutes the first systematic attempts to explore the field of coping with dyslexia, and therefore its contribution should definitely be acknowledged.

A flexible qualitative design was employed by Riddick (1996) to explore a variety of issues related to dyslexia, among which were the perceived difficulties with work at school and the children’s strategies for dealing with those difficulties. The study
involved semi-structured interviews with 22 children aged 8 to 14 and separate interviews with their mothers. ‘A mixture of open-ended, fixed alternative, factual and scaled questions were asked. The purpose was to obtain qualitative data, backed up by some simple descriptive and quantitative information’ (ibid., p.56). Open questions were arranged chronologically leading to a strong narrative thread (Riddick, 2010). Concerning the strategies children use to deal with the difficulties, it was thought that in its abstract form it may be a difficult question to answer, and so a list of strategies already documented in the literature was presented to the children. Results suggested a total of 45 named coping strategies which lie behind the following categories: avoid difficult to spell words, write less, get help from classmate and put off writing or avoid doing writing. Older children were more explicit about their difficulties and the coping strategies they acquire. Finally, Riddick (1996) mentions that this is a small-scale study and conclusions have to be tentative.

Davenport (1991) examined the relationship between the attitudes towards dyslexia diagnosis and the ways of coping. Semi-structured and unstructured interviews were conducted with a sample of 40 dyslexic males, aged 16 to 21. Emphasis was put on the kinds of problems participants had experienced, their understanding of the problems and the ways they copied with these problems. The findings suggested a classification of the coping strategies into four problem-focused (acceptance of responsibility, lowering expectations, getting help, independent techniques) and six emotion-focused categories (positive reappraisal, perspective, social support, avoiding exposure, task avoidance, other handling of emotions). The nine subjects who rejected diagnosis were more likely to deny reality, emphasise on avoiding exposure of deficits and deny unpleasant feeling about school failure. Contrarily, the participants who accepted diagnosis placed more emphasis on problem-focused coping and were more likely to obtain sustainable help from adults, to attempt to master difficult material and to tolerate the discomfort of attempting to overcome their limitations. Davenport (1991) refers among the limitations of the study that the sample was not typical: participants had higher-than-average IQs and socioeconomic status and received an unusual amount of remedial assistance and parental support. Moreover, the study excluded females. Finally, despite stemming from the coping theory, the classification of the coping strategies seems to operate mainly at a descriptive level without theorising categories at an interpretive level that considers the purposes, the methods and the attitudes of individuals’ coping.
In another study, Greenbaum (1987) investigated the dyslexia characteristics and the coping strategies of nine successful famous self-perceived dyslexics using standardised-process interviews. Findings suggested that all participants coped by working hard, developing expertise in areas unrelated to their learning difficulties, developing social skills (e.g. making friends, being charming, having good sense of humour), developing self-confidence via positive mental attitudes and resorting to avoidance techniques such as sloppy handwriting, dropping out school, cheating and pretending illness.

Bruce (1983) refers to a study that followed up the careers of 68 young men and 7 women who had been referred to the Word-Blind Centre in London when they were children. The study used semi-structured interviews and a number of formal and informal tests for reading and spelling so as to examine among other issues the occupational experiences of the sample and more specifically the difficulties encountered and the coping strategies employed to deal with them. Results suggested that school experience was rarely recalled with pleasure although in some case a sympathetic teacher was remembered with gratitude. Moreover, although dyslexia diagnosis was usually accompanied by a feeling of relief it did not automatically mean remedial help. Finally, in terms of coping strategies participants utilised technological aids for writing and spelling (e.g. dictionaries, calculators, typewriters, telephones and tape-recorders), relied on other people (e.g. colleagues and friends) to do or check the writing, used ‘camouflaging’ (e.g. hiding spelling uncertainty with illegible handwriting) and hid difficulties from public gaze by taking the work home. Bruce (1983) claimed that concealment attempts were widespread. Although the study reported some interesting results, it restricted coping strategies to responses to problematic situations and to a descriptive level without any connections with any theory.

In another qualitative small-scale study Brozo (1990) explored the coping strategies of three unsuccessful readers in the context of a secondary school classroom using observations and interviews. Results suggested a full repertoire of ‘classroom survival strategies’ (ibid., p.325): avoiding eye contact with the teacher, engaging in disruptive behaviour (e.g. leaving their seats, snatching personal items from neighbours, throwing items across the room, making inappropriate statements to teachers), becoming a good listener, playing on a ‘with it’ classmate or a good reader, seeking help from friends, forgetting to bring to class books and other materials that may be needed for oral
reading, and using manipulative techniques outside class to gain teachers’ positive perceptions. Similarly to other research, there was no abstraction of the results to a theoretical framework limiting the research to an empirical level.

The same article suggested a gap between students’ coping methods and teachers’ perceptions of these methods. Misinterpretations of the coping strategies seem to be common. For instance, extreme non-participation through lack of confidence seems to be a recurring characteristic in dyslexics (Scott, 2004), deflecting attention from low academic ability and under-performance. Avoidance techniques can be as simple as constantly breaking the tips of pencils, so as to spend maximum time sharpening them and less time doing work, or less obtrusive ways to avoid academic work (e.g. rarely putting up hands or sitting at the back of classes) (Alexander-Passe, 2006). Teachers though, tend to view avoidance strategies very differently, as laziness (Ryan, 1994) and lack of parental support (Alexander-Passe, 2006). Such strategies however, are more likely to be related to anxiety and confusion than apathy (Ryan, 1994). Pollock and Waller (1994) suggested that schoolteachers and examination board markers perceived dyslexic children as immature in terms of their vocabulary and expression, because they preferred to use words they knew how to spell. But, if they used words where the spelling is uncertain, they were accused of being careless. As a result of this misconception both children and adults with spelling difficulties tend to restrict their vocabulary (Mosely, 1989). Such attitudes encourages students to adopt the practice of ‘mock participation’ (Bloome, 1983) according to which students exhibit behaviours that on the surface suggest engagement with the task but may in fact be totally unrelated. For instance, nodding can be perceived as following the teacher’s train of thought or agreeing on a point of view, but it can also imply projection of fake interest or even falling asleep (McCutcheon, 1981). Such misconceptions highlight on a research level the need to give priority to the voice of dyslexic individuals regarding the coping strategies they have developed, the factors that influenced their coping and their appraisal of the effectiveness of their coping efforts.

Although avoidance or disruptive coping strategies such as those mentioned above may ‘work’ for dyslexic students in the classroom, they imply a ‘disengagement’ with literacy and traditional education. However, Bauman (1984; 1996) published the story of an academically successful dyslexic adult - Tom - who learnt to cope successfully in school, university and life with minimal - close to non-existent - reading skills. As a
primary school student he received significant assistance from his teacher and made use of alternative materials (filmstrips, films and audiotapes) to acquire information. Although his academic progress was good, he failed to increase his reading ability (probably because of the decreased reading requirements). In high school he attended partially a learning disability class. After graduating he got a position at a local arts college. During his studies he used to tape-record all lectures and then transcribe them to notes that were interpretable only by him; he made use of the special services (tape recorders, books on tape); his peers and tutors read to him assignments and university instructors read to him tests which expected oral responses. His coping strategies were extremely successful and Tom characterised himself as a ‘model student’. He got a BA in Fine Arts with academic honours and continued ‘his successful non-reading study and learning strategies’ (Bauman, 1984, p.531) earning an MA in Art. According to Bauman (1984) Tom believed that his talent in art strengthened his persistence to obtain formal education and develop coping abilities. Clinical evaluation of his reading suggested weak word recognition and a slow reading rate which made it impossible for him to understand a text. However, he has highly developed aural language abilities, indicating excellent listening skills which enable him to comprehend text presented orally. As an adult Tom held temporary positions as a sculpture and ceramics teacher in two universities. However, due to the financial responsibilities of supporting his family, he set aside his career and worked as a sales representative and a plant engineer, finding his job satisfactory. The literacy demands of his job are minimal but he relies on his wife’s assistance to do the paperwork. Moreover he does not engage much in reading as a leisure activity. Despite the struggle with literacy, he is successful and happy; his life is full and gratifying (Bauman, 1996).

The life-story of Tom, as reported by Bauman (1984; 1996), may not be considered as a coherent scientific study but in interpretive means, it reflects a subjective reality: the reality of a non-reader who succeeded in formal education and in life. Inevitably this generates questions about the dominancy of literacy in education, the appropriateness of non-print instruction and the use of alternative learning strategies. Bauman (1984; 1996) questions the traditional view governing modern societies that serious learning can only come through literacy and suggests the re-evaluation of non-print learning strategies, previously regarded with suspicion. This by no means denies the importance of literacy skills, but does not exclude the possibility of disabled readers reaching self-fulfilment in a literate society by developing alternative coping/learning mechanisms (e.g. aural or
visual). Contrary to the belief that children and adults who cannot read and write proficiently will often fail to reach their potential both in school and in life (Basic Skills Agency, 1997), Bauman (1996, p.535) claims that ‘persons can indeed learn, grow, prosper, and be happy with very limited literacy skills’.

Although within the Greek literature the notion of ‘coping strategies’ has been examined in reference to the general population of undergraduate students (Mpekou-Theodoratou et al., 2005a; 2005b), the phenomenon of coping strategies in relation to dyslexia has been explored solely as an emergent theme in a broader study that explored the personal and educational experiences of 16 students (11 male and 5 female) with dyslexia in higher education. Stampoltzis and Polychronopoulou (2009) employed individual in-depth interviews. The results suggested that ‘students with dyslexia experienced a variety of difficulties at university, and employed a number of coping strategies to deal with them’ (ibid., p.307) such as technological aids (e.g. automatic translators and spell-checkers, scanners for copying texts, tape-recorders), remembering grammatical rules for spelling or using relaxation techniques for stress before exams. Five students, though, suggested they do not use any strategies to cope with dyslexia, because they have accepted their dyslexia and they do not mind; they focus on other areas. The lack of background in coping theory did not allow the abstraction of such descriptive strategies to a coherent theoretical framework and the inclusion of an ‘I don’t mind’ attitude to coping strategies. Finally, coping strategies were seen as a response to pathologising conditions created by dyslexia implying a disabling perspective.

**Conclusions from the review of the research on dyslexia and coping**

Review of the literature in the field of dyslexia and coping suggested that the relevant research is quite limited, especially in the Greek context. Therefore a study exploring the coping efforts of Greek individuals with dyslexia is of great importance. After all, any attempt to transfer the findings of the few international studies to the Greek context seems inappropriate due to differences in the nature of orthographic systems and the structure of languages (Porpodas, 2002). Different writing systems are accompanied by different difficulties in literacy acquisition and so it is possible that individuals develop
different coping strategies as a response to different situations. This, in combination with the paucity of any research in Greek makes essential the conduct of a systematic and theoretically solid research of the coping of Greek dyslexic adults.

Moreover, although the research conducted so far in the field of dyslexia and coping is important because it promotes knowledge and broadens research horizons, the majority of the novice attempts seem be non-systematic, methodologically and ethically challenging and theoretically problematic. Some studies seem to focus unilaterally on empirical aspects of coping strategies without taking into consideration the background of coping theory, and so remain innocently unaware of the alternative theories in the conceptualisations of coping. Even those studies which were conducted within the framework of coping theory seem to mechanistically transfer and use inventories produced by coping theorists in the relatively unexplored field of dyslexia (in relation to coping) where more flexible and holistic designs would perhaps offer a better place to start from. Moreover, these studies did not explain adequately their theoretical positions in reference to the conceptualisation of coping (e.g. we used the CISS inventory because we adopt a microanalytic orientation). Finally and most importantly, the majority - if not all - research examined coping strategies as a response to a problem that generates stress. These medicalised pathologising understandings of the notions of coping and dyslexia seem to have certain implications. First, a stigmatising profile of dyslexic individuals as failed, stressed, depressed and in need of coping is promoted. Second, coping in close relation to stress reduces the notion to exceeding efforts whilst neglecting the aspect of everyday coping efforts. An alternative innovative conceptualisation of coping in relation to events and situations is absent from the literature and perhaps worth attention. Schlossberg’s transitional theory of transactional nature is an intriguing and promising perspective in the field of coping with dyslexia.

Therefore the intention of the present study is to examine whether the transactionist perspective of multiple evolving interactions can provide a fruitful and adequate explanation of the phenomenon of coping with dyslexia and contribute to individuals’ understanding of the situation and the coping process. Moreover, its aim is to examine whether a transitional perspective that conceptualises dyslexia as a significant event (or non-event) that provokes changes in one’s life, but it is not necessarily a problem, can contribute as a new alternative approach in the dyslexia literature. These intentions are translated in specific research questions.
Research Questions of the study

The basic research question takes the following form: *How do Greek adult individuals with dyslexia cope in a modern literate society?* More specifically, it is further analysed in the following questions:

1. *How does the ‘dyslexia’ situation demonstrate and what role does it play in the everyday life of six Greek adults with a diagnosis of dyslexia?*
2. *Which environmental factors play an important role in the dyslexic individuals’ coping efforts and how?*
3. *How do Greek adults with a diagnosis of dyslexia cope with literacy and everyday activities? What coping strategies do they employ? What is the nature of their coping? (Medical, social, interactionist, transactional?)*
4. *Which factors are involved in coping with the dyslexia situation and how?*
5. *Can the transactional model provide adequate insights to the phenomenon of coping with dyslexia and contribute to the field?*
6. *Does the transitional 4 S model of coping explain adequately as an analytical tool the efforts of individuals with dyslexia to cope with their dyslexia situations?*

More information about the methodology and methods employed to explore the research questions and pursue the intentions of the study can be found in the next chapter.
CHAPTER 3: METHODOLOGY

The aim of this chapter is to shed light on the philosophical underpinnings of the present study and clarify the methodological procedures and technicalities which were employed so as to explore the research questions, as these were suggested from the ‘gaps’ in the literature review.

Methodology

The methodology of multiple case studies has been chosen as the most appropriate approach to explore the research questions and serve the purposes of the study; that is, to gain insight and in-depth understanding of the phenomenon of coping with dyslexia with respect to the views and meanings attributed by the participants to their personal situations. In fact, case studies have been increasingly used in the field of special education and in educational research in general (Avramidis and Kalyva, 2006) because they allow the researcher to focus on the exploration of a phenomenon holistically, thoroughly, and without any attempt to control any characteristics or variables related to the participants or their ‘natural’ contexts (Yin, 2003; Miller and Brewer, 2003). As Bakker (2010, p.486) puts it, ‘the goal of case study research is to grasp the totality of a situation or process’ and so, it seems to be the most appropriate design to explain the individuals’ processes of coping with their dyslexia situation in its full complexity. Contrarily to case study research, experimental methodologies usually involve the strict examination of predetermined variables, reducing the richness of the meanings that individuals attribute to certain situations, and so significant aspects of phenomena may remain unexplored.

Besides supporting holistic exploration of phenomena, the case study has been preferred because it allows exploration of details. As has been proposed, human meaning can be fully - or at least sufficiently - conceived only when a detailed account is available (ibid.). Hence, the motivation for employing a case study methodology has been partly
the need for details that explore in depth the unique meaning attributed by dyslexic individuals to their situation of coping with dyslexia. Such details have been referred in literature (Crotty 2003; Bakker, 2010) as ‘idiographic’ details; that is, details which are concerned with the unique (idios in Latin) features of the individual case. Stack and Torrance (2005) mention that among the strengths of case study is that it can represent human meaning of a phenomenon from the participant’s unique perspective. The degree up to which such a representation is feasible seems to be a matter of epistemological debate (which will be discussed in the relevant section). However, it needs to be acknowledged that although there seems to be a long history of positivistic research in the field of dyslexia, very little work has focused on dyslexic individuals’ own voices, personal meanings and explanations of their situations (Riddick et al., 1997). Therefore, case study methodology has been chosen on the basis of facilitating through idiographic details an in-depth understanding of the meaning attributed to the phenomenon under exploration by the specific people involved (Hancock and Algozzine, 2006) reflecting their personal perspectives and not merely the external gaze of the researcher.

There also seems to be a practical reason for choosing a multiple case study design. Similarly to other cases of special educational needs (Avramidis and Kalyva, 2006), accessing a large sample of people with the diagnosis of dyslexia is challenging, given the infrequency and the dispersal of the population of dyslexics as well as the lack of specialised dyslexia units within the educational system and organised associations for dyslexics (adults and students) in Greece.

In terms of type, the present study seems to mainly lie within descriptive case studies, attempting an intensive, holistic and in-depth description of the phenomenon of coping with dyslexia based on the articulation of a descriptive theory. In fact, relevant research and theoretical formulations in relation to the notions of coping and dyslexia were carefully scrutinised and articulated prior to the formulation of the final research questions. As mentioned in the previous chapter, the literature review revealed different - usually perceived as rival - dyslexia models and different coping theories suggesting the exploration of the competing coping theories in relation to dyslexia, with emphasis on the new, unexplored perspective of transactionist coping. Such a descriptive theory was subject to review and debate and finally defined the scope of the study serving as the guide for the design and the data collection (Yin, 1993). The strength of descriptive case study lies in its potential for enlightening patterns and connections in reference to
theoretical constructs, and so for developing or advancing theory (Tobin, 2010). Moreover, ‘the findings from descriptive case studies are generalisable to theoretical propositions’ (ibid., p.288).

Although the study can be considered as using a descriptive theory, the complete lack of research on coping with dyslexia based on the transactional perspective has forced - especially at the initial phases of the study - the concurrent adoption of an ‘exploratory style’; meaning that theoretical propositions and research questions were not treated as absolutes, but rather were open to constant negotiation in the light of data. A flexible interviewing approach was also employed so as to enable the emergence of themes which were very possibly absent in the existing theory due to the paucity of coping research in the dyslexia field. Thus, the study could be perhaps best defined as ‘a descriptive case study with an exploratory element’. After all, the lines between different types of case studies are not always clear-cut; rather, elements from different types may co-exist and overlap in the same study (Avramidis and Kalyva, 2006; Tobin, 2010).

As mentioned above, the present study preferred a multiple case study design - or using Stake’s (1994) term, ‘collective case study’ - to a single case design. Multiple case research involves the concurrent and extensive study of several bounded cases enabling the development of a more coherent conceptualisation of the phenomenon in comparison to the understanding provided by a single case (Chmiliar, 2010). Moreover, multiple case study research advocates the thorough exploration of an issue while enhancing the researcher’s ability to theorise about a broader context (Hancock and Algozzine, 2006). ‘Examining the issues across cases can help provide a tougher test of theory’ (Chmiliar, 2010, p.582). Multiple case studies are considered more robust (Herriott and Firestone, 1983 in Yin, 2003) and powerful because they allow exploration of processes and outcomes across cases, (Chmiliar, 2010) while their evidence is regarded as more compelling (Yin, 2003). Yin (2003) suggests that multiple case designs should be preferred over single case when possible.
In multiple case study research all individual cases share a common characteristic which works as a link that binds them together and makes them form a collection of cases (Stake, 2006); otherwise there is no reason to study these cases as a collective (Goddard, 2010). The shared phenomenon or parameter that binds the cases categorically is called a ‘quintain’ (Stake, 2006, p.6) and in this particular study is the phenomenon of coping with dyslexia. Although ‘the single case is of interest because it belongs to a particular collection of cases’, a multiple case design can support simultaneously the exploration of the quintain and can address the embedded cases (ibid., p.4). After all, a collective case study ‘is not so much a study of the quintain as it is a study of cases for what they tell us about the quintain’ (ibid., p.7). Since the individual case and the quintain are connected in an interactive mode, the present study explored in its full complexity each individual case of dyslexia as a unique entity but also investigated thoroughly the quintain of coping with dyslexia in a cross-case
analysis of embedded cases. Figure 7 illustrates the relationship between the quintain and the embedded individual cases. It also depicts how the individual cases involve the in depth exploration of more than one embedded units of analysis (e.g. self, support, situation, coping strategies). In this sense, single cases can be also considered as embedded, since attention is given to subunits (Yin, 2003).

However, it is important to mention that the present multiple case study design followed neither a sampling logic nor a replication logic. Sampling logic presumes that multiple cases are analogous to multiple survey respondents and require operational enumeration of the entire pool of respondents and subsequent statistical analysis. ‘Any application of this sampling logic to case studies would be misplaced’ (ibid., p.48). Yin (2003) suggests a replication logic. Replication logic comes originally from experimental designs and advocates that the findings of an experiment may be adequately replicated in similar situations and so, generalised to similar situations (Yin, 2011). This rationale has been introduced to case study research based on the assumption that ‘the logic underlying the multiple-case studies is the same’ (Yin, 2003, p.47) and so, multiple-case studies are likely to have replicated outcomes. In fact, Yin (2003) suggested that the rationale for conducting multiple-case designs derives directly from the supposition of literal replication (predicting similar results) and theoretical replication (predicting contradictory results but for understandable reasons) of findings.

However, the present study adopts a different sampling logic which can be called ‘quintain logic’. All cases in the study were included due to the common characteristic of dyslexia. However, due to the variability in nature of dyslexia, it is acknowledged that some aspects of the quintain can be quite different from individual to individual. As a result, although the possibility of replication is not denied, the quintain logic contrasts with the notions of ‘prediction’ of similar outcomes or ‘expectation’ of contrasting results but for ‘predictable’ reasons, because these seem to imply an attempt to identify clear-cut cause-and-effect relationships which is rather incompatible with the assumption of the complexity of human nature and the uniqueness of each case. After all, sharing a characteristic (e.g. dyslexia) does not guarantee same/similar ‘outcomes’ or ‘predictably’ dissimilar outcomes, given the multiplicity of influential interactive environmental factors and the variability of personal characteristics. Therefore, although quintain sampling selects cases on the basis of having a similar characteristic and accepts that replication of findings is likely to occur, its aim is not to replicate findings.
in an experimental mode of variable manipulation. Each case is examined separately and in its full complexity and subsequently findings are cross-checked following a parallel design (see Figure 8). This is different from the sequential design suggested by the replication approach according to which when a significant finding is found, the immediate research aim is to replicate this finding by conducting a second, third or even more case-studies. Finally, it should be mentioned that the quintain logic of sampling accepts the possibility of ‘a theoretical replication’ but for ‘unpredictable’ reasons because in opposition to replication logic there are no direct assumptions or expectations between the quintain and the findings.

What is more, the multiple case study design was chosen because it permits the exploration of how the phenomenon performs in different environments (Stake, 2006). In the present study adult individuals with dyslexia have different life-styles and participate in different environments. As a result, the phenomenon of coping with dyslexia can be explored in relation to different contexts such as school, university, work, a variety of (leisure) activities in which participants may be involved, as well as

Figure 8: Process of conducting the multiple case research so as to explore the phenomenon of coping with dyslexia.
contexts such as family, peer relationships, etc. Contextuality tends to be a central notion in case study designs. As Stake (2006, p.3) claims, ‘the case has an inside and an outside’ and the exploration of outside elements defines the context, illuminates the relationship between the case and its environment and finally adds to the rich exploration of the phenomenon under investigation. After all, there seem to be cases in which it is hard to specify with accuracy where the boundaries are between the case and its environment; rather the links between the notions of environment and individual experience seem to be important concepts for enlightening the phenomenon under investigation (Stake, 1988). Thus, by selecting a multiple case study design the phenomenon of coping with dyslexia can be explored within a variety of contexts - more than those provided by a single case - enabling a richer and more holistic approach to the quintain.

Case studies are not without weaknesses. Criticism has been made in reference to the limited possibilities of generalisation (Wellington, 2000; Stark and Torrance, 2005; Avramidis and Kalyva, 2006). However, what is perceived as a weakness in terms of generalisability is concurrently the main strength of case studies (Wellington, 2000). Due to the in-depth exploration of the unit, case study approach can provide rich and detailed conceptualisation of a specific phenomenon in its natural context, exuding a strong sense of reality (ibid.). This is not possible with large-scale designs that focus on statistical generalisations. However, this issue of generalisability is further discussed in the chapter about the quality of the study.

**Ontological, epistemological and theoretical perspective assumptions**

Case study is not a single, coherent form of research but rather a research ‘approach’ that has been employed by many theoretical traditions ranging from social sciences to positivist disciplines (Stark and Torrance, 2005). What all these approaches have in common is the emphasis on the thorough analysis of a unit. However epistemological and paradigmatic assumptions in case study designs may differ a great deal. The present study has employed a qualitative design based mainly - but not solely - on interpretive understandings, because it is interested in participants’ personal interpretations in relation to the phenomenon of coping with dyslexia. Interest in human meaning is
central in case study research, but also a hallmark of the interpretive theoretical perspective\(^8\) in social sciences (Bakker, 2010).

The theoretical perspective of interpretivism arose as an opposition to positivistic attempts to explain the human and social world using naturalistic law-governed methodologies/tools (ibid.). ‘From an interpretive perspective the hope of a universal theory which characterises the normative outlook gives way to multifaceted images of human behaviour as varied as the situations and contexts supporting them’ (Cohen et al., 2007a, p.22). In other words, interpretivism rejects reductionist positivistic assumptions which see individuals as invariant, passive and controlled, overlooking intentionality, individuality and free will (ibid., p.18). The interpretive paradigm advocates concern and respect for the person (Garrick, 1999; Cohen et al., 2007a). This is expressed at a methodological level by the employment of flexible designs and open methods that give voice to the participants (Dialektaki and Thoma, 2009). As suggested above, very little work has been published based on the voices of dyslexic individuals (Riddick et al., 1997). At an ethical level the interpretive paradigm involves doing research \textit{with} participants rather than \textit{on} participants (Blumer, 1962).

By acknowledging the variability of human behaviour interpretivism focuses on the uniqueness of the individual case seeking what is idiographic. Therefore, it is suitable with case study methodology which is also concerned with idiographic details so as to grasp meaning more coherently. After all, a central principle of interpretivism is the conceptualisation of the meaning people give to their experiences (Smith, 2008; Bakker, 2010).

Although interpretivism is interested in the deep representation of the personal experience, interpretive research has received criticism as being philosophically re-interpretive (Dialektaki and Thoma, 2009). Garrick (1999) claims that by retelling a story the researcher imposes his/her perspectives on the story and becomes a coloniser. The researcher can manipulate data strictly according to his/her interests and so, marginalise the voices of the participants that interpretivist research was supposed to encourage and respect. This raises both ethical issues in terms of power relations and ‘paternalism’ (Mac an Ghail, 1991) and methodological questions about the ‘treatment’

\(^8\) Theoretical perspective is ‘the philosophical stance informing the methodology’ based on the epistemological assumptions about knowledge (Crotty, 2003, p.3).
of data and the validity of the outcomes. However, the idea of a detached, objective researcher seems to be facile when an in-depth understanding of the human experience is sought. The role of the interpretivist researcher is to ‘understand, explain, and demystify social reality through the eyes of different participants’ (Cohen et al., 2007a, p.19). As Crotty mentioned (2007, p.19) ‘individuals’ behaviour can be only understood by a researcher sharing their frame of reference’. This study assumes that the interaction between the researcher and the participants is an integral element of social research and fully acceptable if accompanied by reflexive practice (see below).

Additionally, interpretivism has been criticised for low generalisability of research outcomes (Dialektaki and Thoma, 2009) and lack of rigorousness (Denscombe, 2002). However, thoughtfully and systematically planned interpretive research can achieve preciseness and accuracy (ibid.). In terms of generalisability, the ‘weakness’ of interpretivism seems also to be its strong point because the ability to relate to a case through detailed description and deep understanding may be more fruitful than statistical generalisations (Wellington, 2000).

As suggested above the present study stands mainly but not solely on interpretivist theoretical assumptions. A central tenet of the interpretive paradigm is that situations are fluid and reality is multilayered, complex, context-related and socially constructed (Mertens, 1998). In this sense it is compatible with complexity theory suggestions. Complexity theory propositions were also integrated in the philosophical stance of the present study. The interpretive approach does not exclude perspectives from other paradigms (e.g. positivist, critical or postmodern perspectives); rather, as Garrick (1999, p.154) comments about paradigmatic assumptions, ‘a key issue is how such insights are used, and whether they are used coherently. The generation (and legitimisation) of knowledge about the social world is stronger when not reliant upon a one-best-way approach’. All paradigms have strengths and weaknesses. Therefore, instead of adopting a mere paradigmatic approach to understand phenomena it is essential researchers move away from strict normative thinking and acting, and broaden their horizons by re-conceptualising traditional notions of disability within different paradigms (Dialektaki and Thoma, 2009). As an alternative to engaging in dogmatic paradigmatic conflicts, a reflexive practice in research is suggested. Reflexive practice can be seen as a personal journey through concepts under different disciplines entailing a holistic understanding.
of research practice as well as the possibility of alternative understandings and paradigmatic cooperation (ibid.).

Therefore, the present study stands on interpretive assumptions but also shares elements of complexity theory understanding. The two philosophical perspectives seem to focus on different aspects of the same story: interpretivism stresses the importance of an individual’s experience in exploring a phenomenon (e.g. representation of the personal experience of coping with dyslexia) while complexity theory focuses on the exploration of a phenomenon in its context based on the individual’s report of his/her experience (e.g. the system of multiple factors and their interrelationships that influence coping with dyslexia, part of which is the individual and according to the individual’s report). It can be claimed that the two paradigms overlap, entailing each other’s elements and sharing common characteristics, although stressing different aspects. Moreover they are companionable in that they advocate against linear cause-and-effect relationships in the social sciences due to the complexity of human behaviour and in that they examine phenomena holistically and inseparably from their context.

More specifically, complexity theory - the emergent fourth paradigm in educational research (Morrison, 2002) - stands against linear, reductionist, patterned, objective, mechanistic, controlled, predictable, law-like approaches, suggesting that research of human behaviour should be looked at non-linearly and holistically (Cohen et al., 2007a). Restricting the exploration of phenomena in the investigation of certain variables misses the dynamic interaction of several parts (ibid.). In fact, a central tenet of complexity theory is the significance of interconnectedness of variables within systems and the qualities that emerge as a result of these interconnections (Radford, 2006, p.178). An individual is not an island but is connected externally and internally in multiple ways (Morrison, 2008). For instance a dyslexic child is linked to family, school, peers, friends, teachers, curriculum, the dyslexia institute etc.; teachers are linked to parents, the educational system, support systems, the department of education, policy makers and so on. Thus, factors tend to interlink in multiple ways constructing a web; an ecosystem. Complexity theory suggests that this web of relationships should be the unit of analysis (Capra, 1996).

It is through the dynamic interaction between the web factors that new properties, behaviours and patterns emerge, changing and developing the ecosystem (Mason,
The notion of emergence is central in complexity theory, advocating that ‘given a sufficient degree of complexity in a particular environment, new (and to some extent unexpected) properties and behaviours emerge in that environment. The whole becomes, in a very real sense, more than the sum of its parts in that the emergent properties and behaviours are not contained in or able to be predicted from the essence of the constituent elements or agents’ (ibid., p.37). Therefore, isolating variables from the web misses rich information produced by the relationships among elements that are part of the complex system.

The relationships among elements ‘are inherently dynamic and transformational’ (ibid., p.37) because little changes in one element can turn out producing (unpredictably) massive effects for other elements and transform the system as a whole. Moreover, according to complexity theory the system scans and senses the external environment and makes internal changes and developments so as to cope with the demands of the changing external environment. However, while responding the system changes its environment too. Therefore, a continuous dynamic reciprocal relationship is produced between the environment and the system which change each other and co-evolve (Battram, 1999 in Morrison 2006). Therefore, the system is constantly predisposed to change.

Apart from change, emergence and connectedness, communication and collaboration are also central notions in complexity theory (Cohen et al., 2007b). Elements of the system communicate and exchange information through a system of distributed knowledge. ‘Knowledge is not centrally located in command and control centres or in limited sets of agents (e.g. government); rather it is dispersed, shared and circulated throughout the organisation and its members” (ibid.).

Being a theory of change and development through relationships, complexity theory raises an interesting agenda for the philosophy of educational research and practice (Morrison, 2008). Although it has seen a rise in natural sciences, its entry to social and educational research is relatively new and its application is so far limited and piecemeal (Morrison, 2006; Radford, 2006). However, it is a challenging prospect in educational research offering ‘considerable leverage into understanding societal, community, individual and institutional change’ (Cohen et al., 2007a, p.34).
Complexity theory comes with certain propositions for conducting research. ‘In addressing holism, complexity theory suggests the need for case study methodology, qualitative research and participatory, multi-perspective and collaborative… partnership-based forms of research, premised on integrationist, qualitative and interpretive accounts’ (Morrison, 2008, p.28-29). Complexity theory suggests case study (especially multiple case study) as an appropriate methodology because it catches complexity, locates the individual(s) in multiple environments, depicts heterogeneity and provides multi-perspective insights into a phenomenon (Morrison, 2006; 2008). Apart from the interest in viewing the system holistically as having its own ecology, complexity theory suggests taking into consideration trivial information because due to the unpredictable nature of interrelation even trivial elements may produce enormous implications. Finally, an important proposition of complexity theory is the replacement of a simple causality agenda with research that investigates networks, relationships, feedback and interactivity in context (Cohen and Stewart, 1995).

These propositions have implications for educational practice too (Radford, 2006). In educational terms complexity theory suggests a reconsideration of success, since there is no linear causality. In learning, factor A cannot guarantee implications B (A⇒B) but rather learning is an ecosystem of multiple interrelating and interacting elements evolving unpredictably and, then no fixed formulas in educational practice can guarantee success (ibid.). Mason (2008) suggests that it is preferable to take into consideration as many ecosystem factors as possible when intending to make a change. ‘Our best chance of success lies in hitting the problem from as many angles, levels and perspectives as possible’, resembling a shift in the prevailing ecosystemic ethos rather than an intervention at the level of separate elements (Mason, 2008, p.45).

In this sense, education changes focus; emphasis is put on the learning process rather than on reaching certain objectives and targets (Radford, 2006). In other words, learning is perceived as more flexible, tentative, imaginative and creative, active, experiential, participatory, unpredictable, and celebrating interaction, decentralised control and diversity (Davis and Sumara, 2005). Moreover, such a stance suggests a dynamic, open, participatory, emergent, relational curriculum within which teachers are not experts who control the knowledge process but rather co-learners and co-constructers of the meaning; and students are encouraged to actively participate, be autonomous, active and creative (Morrison, 2008). ‘Students and teachers together create, share and shape their
own and each other’s meanings’ (ibid., p.27). Finally, since learning is an evolving ecosystem teachers need to be ‘eco-technicians’ (Kelly and Allison, 1999, p.201–214 in Morrison, 2008) thereby to understand the webs of learning that students inhabit and how to promote them holistically.

Complexity theory is not without difficulties. It has been challenged on the basis of its usefulness since it advocates for the unpredictability of outcomes. However, according to Mason (2008) complexity theory is not prescription oriented, rather it opts for comprehension and description. Unpredictability seems to reduce the future perspective of complexity theory which is pinned to ‘here’ and ‘now’. However, complexity theory is certainly useful in contemporal terms. Despite the inability to provide guarantees for future outcomes, complexity theory can offer suggestions for practice at the present time (Morrison, 2008). Due to the detailed exploration of the web of interrelated factors is likely to provide in-depth understanding about the functions of the factors or the operation of the system as a whole, to problematise intervention tactics but also to generate suggestions for action based on present data. Moreover, ‘in an unknowable future, the essence of complexity is to raise questions rather than to provide answers’ (ibid., p.23). It provides the opportunity for a re-awakening of such topics which have been taken for granted (ibid.). Thinking over a situation in its full complexity is perhaps more important than attempting to deal with it blindly based on unquestioned assumptions. For example, complexity theory would problematise about adequacy of specialised support for dyslexia as a sole method of support - since some students with diagnosed dyslexia cannot read and write even after the systematic instruction - suggesting that other factors that perhaps influence learning should be taken into consideration. Therefore, although complexity theory cannot guarantee certain outcomes, it can provide suggestions by posing questions about present circumstances.

In addition, complexity theory has been challenged for its lack of moral considerations, for under-theorising issues of power and responsibility and for describing key elements that rule systems, although claiming to be against determinism or positivism (ibid.). However, in this sense all theories with certain philosophical propositions are deterministic. Although these issues are important it should be kept in mind that there is no theoretical perspective which is unproblematic in any sense. If complexity theory is seen as a philosophical stance - as it was seen here - and not as a coherent framework of practice or a prescriptive process of conducting research, something that it is not, then it
provides challenging perspectives to research. After all, complexity theory stresses a feature that all other paradigms overlook: the ecosystemic interrelational nature of phenomena. In this sense, complexity theory seems to be compatible with the exploration of the coping models and more specifically with the investigation of the adequacy of the 4 S system. Furthermore, complexity theory in cooperation with interpretivist understandings seems to shape a coherent philosophical background for the present study.

In terms of their epistemological assumption both complexity theory and interpretivism draw upon constructionist thought which argues that there is no objective truth waiting for people to discover it. Rather, meaning is constructed when people’s consciousness engages with the world (Crotty, 2003). As a consequence, ‘people make their own reality (Miller and Brewer, 2003, p.41). ‘This does not mean that we can never really know anything: rather, it suggests that there are “knowledges” rather than “knowledge”’ (Willig, 2001, p.7) with different people constructing different meanings, even in reference to the same phenomenon or situation (Crotty, 2003). Thus, the phenomenon of dyslexia cannot be defined ‘objectively’ because different individuals may have constructed different meanings in reference to the notion (e.g. for some people it may be a neurological condition while for others it may be a social oppression related to mass literacy in modernity).

However, it will be misleading to think of meaning solely as a function of personal engagement with the world while neglecting the social perspective of meaning construction. ‘We are all born in a world of meaning. We enter a social milieu in which “a system of intelligibility” prevails’ (ibid., p.54). Meaning is a social convention constructed and reproduced by culture. And it is through culture we come to inhabit and be inhabited by this pre-existing system of knowledge. Therefore, we unavoidably view the world through the lenses of our culture (ibid.). In this sense, objectivity is never possible and scientists can never start a study with a clean sheet since any gaze is always filtered through a socially constructed understanding. However, the dominant positivistic paradigm still focuses on the ‘objective discovery of truth’ and establishment of universal laws neglecting that - at least - common mainstream understandings of dyslexia are socially constructed and sustained by the dominant culture.
Thus, meaning is neither an exclusively personal creation nor a mere societal construct; rather it tends to be an interplay and a balance between sociocultural and personal constructions. Such constructionist epistemological assumptions about the constitution of meaning tend to have unavoidable implications for research. Constructionists argue that researchers are not distinct from their subject matter of research but rather they interact with their subjects and it is through this mutual interaction that deeper understanding and interpretation of social life is achieved (Miller and Brewer, 2003). The researcher is ‘part of the life-world being studied and acts as interpreter, mediator or communicator in this world’ (ibid., p.42). This perspective is quite different from positivistic research assumptions, but is not necessarily less scientific.

Reflexivity emerges as a key issue in constructionist research because it is through this process that the researcher acknowledges his/her ‘contribution to the construction of meaning throughout the research process’ and ‘the impossibility of remaining “outside of” one’s subject matter while conducting research’ (Willig, 2001, p.10). Reflexivity can be personal and epistemological. For instance, it’s been acknowledged that personal interest in the dyslexia world has been a major reason for choosing this topic of research. Moreover, the paradigmatic assumptions of the present study are in line with the researcher’s personal beliefs about the nature of the world and the way we tend to get to ‘know’ it. Hence, it has been recognised that the topic, the research questions and the design of the research has been defined by the personal paradigmatic assumptions. Epistemological reflexivity encourages reflection upon these issues and supports thinking about the implications of our assumptions for the research and its findings (ibid.).

In terms of ontological assumptions constructionism can be perfectly compatible both with relativism and realism, although the two notions are traditionally considered as being in opposition. Realism holds that the external world exists independently of our perceptions and representations of it (Nightingale and Cromby, 1999) whilst relativism questions the independent existence of the world highlighting the importance of the interpretations applied to it (Willing, 2001). However, constructionism seems to provide a platform for communication between the two ontologies. Constructionism does not deny the ‘out-there-ness’ of objects but it sees objects necessarily in relation to human consciousness; the meaning attributed to the objects’ ids is shaped by human consciousness. Similarly consciousness does not stand alone; it is always consciousness
of something (Crotty, 2003). In other words constructionism brings together and combines objectivity and subjectivity. ‘Subject and object, distinguishable as they are, are always united’ (ibid., p.45).

Since constructionism claims that meaning is constructed out of an existing object (ibid.) dyslexia can be considered as an independently existing condition which is ‘real’. However, the meaning of ‘dyslexia’ is not discovered (or created) but constructed over the entity of dyslexia as people engage with the notion. Dyslexia is not an ‘impairment’, ‘problem’ or ‘difference in learning’ until people define it as such. In other words, what is said to be ‘dyslexia’ is really just the ‘sense we make of it’. Consequently, due to cultural or interpersonal differences different meanings may be constructed and attributed to the entity, making ‘dyslexia’ a relative notion. Under this perspective, constructionism may well be associated with a relativist ontology which ‘questions the “out-there-ness” of the world and emphasises the diversity of interpretations that can be applied to it’ (Willig, 2001, p.13).

**Sample**

Six adults, between 19 and 32 years of age, with a diagnosis of dyslexia volunteered to participate in the study. Sampling in case studies is largely purposeful, in that it focuses on the selection of information-rich cases that permit to the researcher an in-depth study of issues of central importance regarding the phenomenon under investigation (Fletcher and Plakoyiannaki, 2010). In the present study purposive sampling has been employed not only because it tends to be a typical form of sampling in qualitative research, but also because it allows the selection of cases to be included in the sample on the basis of the possession of a particular characteristic-criterion (Cohen et al., 2007a). In the particular study the criterion being sought was the official diagnosis of dyslexia. In this way, a sample is built to serve – as its name suggests - the purposes of the research, which in this research is the investigation of the coping with dyslexia. Purposive sampling provides access to ‘knowledgeable people’ who have in-depth understanding about a particular situation due to expertise or personal experience (Ball, 1990, in Cohen et al., 2007a). There seems to be little benefit from a random sampling in this case when the majority of the random subjects may be unaware of the issue under investigation and as such, unable to comment on it (Cohen et al., 2007a). Purposive
sampling is intensively selective and as such cannot make any claims of being generalisable to the wider population, in a positivistic sense. However, generalising is not the primary concern of the purposive sampling. Rather, the priority is the acquisition of rich and in-depth information from those who are in a position to give it (ibid.). Embedded in this is the assumption that the personhood of the participants is of central importance and people cannot be treated as essentially interchangeable (Palys, 2008).

Adequacy of sample size is relative in case study research and there are not precise rules regarding the number of cases to be included in a multiple case design (Fletcher and Plakoyiannaki, 2010). Stake (2006) suggests that the benefits of multicase study will be limited if fewer than four cases or more than ten cases are chosen. The present study followed Yin’s (2003) recommendations regarding the sufficient number of cases for a multicase study, which claim that typical criteria for sample size are irrelevant because the design should not follow a sampling logic. In this sense, the accurate number of participants cannot be predetermined but comes up as an emergent element of the research processes. Although there are not precise rules about sample size, there seems to be a breadth-depth trade-off (Avramidis and Kalyva, 2006; Fletcher and Plakoyiannaki, 2010) that influences multi-case studies and this is partly the reason that this research preferred to study a limited number of cases. After all, as Golby (1994 in Avramidis and Kalyva, 2006) pointed out, the assumption that a bigger sample of cases increases the robustness of the study seems to be a spurious concept borrowed from positivistic disciplines that is incompatible with the rationale of qualitative research. Another reason for choosing to explore six cases is the difficulty in accessing large populations of adults with dyslexia within the Greek context partly because until recently dyslexia has been under-recognised. Moreover, although in recent years there has been a significant increase of interest in dyslexia resulting in the constitution of organisations and institutes for students, there seems to be a lack of organised structures for dyslexic adults, which makes it difficult to access a large number of officially diagnosed adults.

In terms of locality, participants came from the city of Athens because it is the largest urban area of the country and so, the possibility of locating participants with dyslexia seems to be higher. Moreover, a relevant research (Drossinou, 2002) reported that the highest percentage of students with official diagnosis of learning difficulties - among which dyslexia is the most common - are concentrated in the capital of Athens.
With regard to age, the study focused on adult participants on the basis of providing more holistic perspectives and in-depth understandings of coping with dyslexia. There is an assumption that adults will give insights on their past experiences, reflecting on different life-stages (e.g. school years, university years, adulthood) and so it is likely that they would provide a more complete representation of the phenomenon. Considering that activities seem to be bounded to life-stage and get influenced by the contexts (Stake, 2006) that individuals participate in, adults are more likely to provide insights on different life-stages/contexts with regard to the phenomenon of coping with dyslexia; as opposed to students who because of young age and limited experiences are expected to have a more restricted perception of the phenomenon. Moreover, the preference for adult participants has been indicated by the fact that the theoretical basis of the study - Schlossberg’s 4 S system - has been developed in the context of adult development theory (Evans et al., 2010).

Finally, the sample could be characterised as a ‘relational’ sample because it was constituted within an ethic of relational care which advocates that research should be conducted with participants, not on participants (see ‘Ethical considerations’, p.129-131). Relational ethics situates ethical action in relationships (Austin, 2008) and stresses the importance of respect, mutual recognition and care (Williams, 1999). From this stance, the development of relationships with the participants or the participation of individuals who belong to the researcher’s social network prior to the interviews, is not ‘forbidden’ but rather welcomed. In the present study all participants were people that the researcher knew prior to the study.

Goodson and Sikes (2001) suggested, though, that there may be methodological and ethical issues when conducting research in your own ‘backyard’. For instance, participants may be cautious about the information they reveal. ‘When the research solicits information of a personal nature, the potential ‘power’ that such knowledge gives to the researcher can be considerable’ (ibid., p.25). However, there is a high chance participants hesitate to talk about personal information in a study conducted by an unknown detached powerful researcher because they feel threatened (Hambridge, 2001). After all, in the context of the present study the establishment of an ethic of care seemed to have contributed to the prevention of the operation of such power relations. Moreover, familiarity with participants may provoke a distraction from the topic of
interest. To prevent this from happening in this research ‘special’ meetings were arranged, at the beginning of which the participants were reminded of the purpose and procedures of the research as well as their ethical rights. Moreover, participants were kindly asked to submit a written consent form signifying that the forthcoming conversation will be an interview with purpose; not ‘chit-chat’. Therefore, the framework of the meeting was clearly defined. In cases where a participant strayed from the subject they were brought back to the point by asking a relevant question; though not instantly, because details initially considered as irrelevant may be sources of significant information.

After considering the potential risks, a relational sample was preferred because of having certain advantages. Considering the difficulty to access large population of dyslexic adults due to the lack of relevant structures, it is beneficial to cooperate with people with whom a relationship of mutual respect is already created and who are actively willing to help. After all, it is hard to make claims of a relational ethics approach with unknown participants because a relationship of intimacy, mutual respect and care cannot be developed solely in one or two research meetings. More details about relational approach can be found in the ethics chapter.

**Data collection method**

The present study employed interviews as a stand-alone method for collecting data. Interviews generally take the form of ‘conversations’ with the purpose being to collect information about specific issues (Miller and Brewer, 2003). In other words, interviews are regarded as an interchange of views between two or more people on a topic of mutual interest (Kvale, 1996). They are one of the most widely used knowledge-producing practices in social qualitative research (Brinkmann, 2008) and a widespread data collection method in case study research (Hancock and Algozzine, 2006). Possibly because of the frequent use, there seems to be an assumption that interviews are easy to conduct (Miller and Brewer, 2003). However, interviews are not simply conversations but deliberately set up conversation with the purpose of gathering information about specific issues or research questions (ibid.). The decision to employ interviews though was not based on the high frequency of use of the method in social disciplines but rather on its suitability to pursue the purposes of the study.
The primary intention of the study has been the in-depth understanding of the phenomenon of coping with dyslexia with reference to the meanings participants attribute to their personal situations. So, interviews seem to be the most appropriate method to pursue the purposes of the research because they attempt to comprehend - perhaps more efficiently and holistically than any other method - how people think and feel about certain issues (Miller and Brewer, 2003); to ‘understand the world from the subjects’ point of view, to unfold the meaning of peoples’ experiences’ (Kvale, 1996, p.1). As Seidman (2006, p.9) puts it, ‘at the root of in-depth interviewing is an interest in understanding the lived experience of other people and the meaning they make of that experience’. Since interviews provide rich personalised information about the lived experience (Mason, 2002 in Hancock and Algozzine, 2006), they seem to respond adequately to the purposes of the study as a stand-alone method. After all, the sufficiency of a method depends on the intentions of the research and the question being asked (Locke, 1989 in Seidman, 2006). According to Seidman (2006) if the researcher is interested in the participants’ experiences and meanings, interviews seem to be the best avenue of inquiry and can stand as ‘the’ method (as opposed to ‘a’ method). Similarly Miller and Brewer (2003) suggest that interviews that are concerned with in-depth, detailed information and ‘micro-analysis’ of phenomena can be used as a stand-alone method providing rich details in the participants’ own words.

Moreover, interviews seem to be appropriate for the present study because they give prominence to the importance of the role of the participants. Due to the flexibility of their design (especially less structured forms), interviews allow participants to express themselves freely and report what they think with greater spontaneity (Seidman, 2006). Interviewing has no intention to ‘evaluate’ or to simply get answers to questions; rather, ‘at the heart of interviewing is an interest in other individuals’ stories because they are of worth’ (ibid., p.9). The traditional perspectives of interviewing which view participants as passive ‘vessels of answers’ (Barlow, 2010) or manipulable subjects who simply respond to the questions set by experts seem to have given way to approaches that recognise and welcome the participants’ active engagement in the construction of knowledge through dialogue/conversation (Kvale, 1996; Cohen et al., 2007a). Interviewees are perceived along with the interviewer as co-constructors of the interview process (Walford, 2001) and collaborators in the constitution of meaning (Barlow, 2010). Such constructivist approaches acknowledge the significance of the
participants’ role and suggest that interviewing is not unidirectional but a dynamic bidirectional process that enables ‘participants - be they interviewers or interviewees - to discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view’ (Cohen et al., 2007a, p.347). Therefore, as Laing (1967, p.66 in Cohen et al., 2007a) puts it, ‘the interview is not exclusively either subjective or objective, it is intersubjective’.

So, the question that emerges is: whose meaning does the interview bring forth? Traditional perspectives which advocate that an objective interview can be a ‘direct pipeline to the participants’ life-worlds provided that the interviewer engages in a non-directional unbiased questioning’ (Brinkmann, 2008, p.472) have received strong criticism on the basis that interviews seem to be dynamic meaning-making processes which produce rather than uncover ‘objective truth’. ‘Although the interviewer can strive to have the meaning being made in the interview as much a function of the participant’s reconstruction and reflection as possible, the interviewer must nevertheless recognise that the meaning is, to some degree, a function of the participant’s interaction with the interviewer’ (Seidman, 2006, p.23). No matter how hard the attempts to minimise the interviewer’s and the interviewing context’s effect on how participants reconstruct and report their experience, according to postmodernists and constructivists any efforts to disembody interviews from their interactional elements are pointless (Brinkmann, 2008). The interaction between the interviewer and the interviewees is inherent in the nature of the method (Seidman, 2006). At least, qualitative interviewing acknowledges the role of the instrument (the human interviewer) (Lincoln and Guba, 1985) instead of claiming objective understanding through unprejudiced questioning. As Schutz (1967) remarks, it is impossible to perfectly understand another’s meaning because to do so we would need to be the other person; we would need to have exactly the same experience and the same stream of consciousness. However, recognising the restrictions/limitations of our understanding of others does not imply that there is no chance we can understand them fully (Seidman, 2006). For instance, attempting to understand an action solely by observation may provide partial or different understandings to the subjective understanding constructed by the actor of this action. Interviewing, though, has the ability to clarify the meaning that actors attribute to their experience, providing access to the ‘subjective understanding’ (Schutz, 1967).
Interviews were preferred in this study because of their flexibility and their ability to elicit rich personalised information but also because of the lack of an instrument that assesses coping with dyslexia efficiently. In fact the measurement of coping strategies seems to be the most controversial issue in the field of coping with nearly all scholars disagreeing on how they should be assessed (Aldwin, 2007). There are debates as to whether instruments should assess coping styles or coping processes; whether general items that apply to a variety of situations assess coping efficiently or if the construction of situation-specific inventories is more appropriate; whether the tool should look for detailed, complicated descriptions of coping strategies or consist of generalised categorical dimensions (e.g. avoidance approach), etc. (ibid.). Such controversies make the use of existing instruments ‘problematic’. For example, the process-oriented Ways of Coping Scale (Folkman et al., 1986) has been criticised for unstable factor structure and poor reliability. Moreover, although instruments have been developed for measuring coping with specific situations such as Down’s syndrome, chronic illness, asthma, diabetes, etc., there seems to be lack of a situation-specific standardised instrument for coping with dyslexia which could be used with Greek adults. But even if a coping with dyslexia scale existed, it is quite likely that this study would have preferred a more flexible, qualitative design which reflects the perspectives of the participants without the risk of imposing external presumptions on the phenomenon.

The decision to employ interviews as a stand-alone method for exploring coping with dyslexia was also based on ethical and practical reasons. Due to the nature of the phenomenon, it would be inappropriate to force individuals with dyslexia to interact with any form of reading and writing, especially since there is no intention to evaluate their literacy efficiency. Using a questionnaire or an inventory which demands participants to accurately read questions and respond in written form on paper would probably have caused increased inconvenience; something that does not comply with the ethical approach of this study.

For all the reasons mentioned above it was decided that semi-structured interviews was the most appropriate method for exploring the phenomenon of coping with dyslexia in the context of the present study. Semi-structured interviews are placed in the continuum between structured and unstructured interviews (Barlow, 2010) and seem to be

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particularly well-suited for case study research’ (Hancock and Algozzine, 2006). A few broad topics (e.g. diagnosis, dyslexia characteristics, support, coping strategies) and sets of pre-figured questions were prepared in advance (e.g. how does dyslexia demonstrate in your case? What do you do to cope with school/university/work expectations? What type of support have you received in relation to dyslexia?). However, the wording and the sequence of the questions were flexible. Some questions were omitted while others emerged or evolved as the interviews progressed. Hence, an advantage of semi-structured interviews is that the researcher can adapt the instrument to the individuality of the respondent (Miller and Brewer, 2003). Minimal direction was provided, with participants being encouraged from the outset to talk freely about their issues of interest and express their subjective experiences as fully and spontaneously as they choose (Cohen et al., 2007a). Follow-up questions were also employed to prompt and probe the participants’ views enabling deeper comprehensiveness and richness of response where necessary (Morrison, 1993).

In order to enhance clarity and detail, the research questions took the form of non-directive, open-ended questions (Cohen et al., 2007a). The advantage of open-ended questions is that they allow the participants to select how they will orient and respond to the research topic (Roulston, 2008). More specifically, open-ended questions provide participants the freedom to choose which meaningful experiences to report using personalised descriptions, without being influenced by the researcher’s terminology and without enabling the researcher to make any presumptions about the answers (ibid.). In this manner they seem to be in line with the intentions of semi-structured interview designs which ‘invite interviewees to express themselves openly and freely and to define the world from their own perspectives, not solely from the perspective of the researcher’ (Hancock and Algozzine, 2006, p.40).

Finally, the broad topics and underlying open-ended questions were organised in an interview protocol in the form of a table (see Appendix 2), which was used as a guide for reminding, an ‘aide-mémoire’ (Miller and Brewer, 2003, p.167) of the key issues and enabling connections between different parts of the interview.
Data analysis methods and procedure

Analysis started with audio recorded data being transcribed. Transcribing is a critical stage in research because there is a potential for data loss, reduction, distortion (Cohen et al., 2007a) or even ‘colonisation’ via the (intentional or unintentional) imposition of the researcher’s personal presumptions on the transcript, similar to a powerful colonist who controls a colony. Although, transforming a ‘living’ social encounter to a remote writing system inevitably loses data (ibid.) transcribing renders data into a new form and therefore it can be viewed as a re-presentation. Some scholars though advocate that this is the point, that researchers’ understandings replace or ‘do something’ to the original research data (Gibson and Brown, 2009). However, if we think of transcribing as a mediating practice, the same can be thought of audio recording which provides a partial rendering of what happened by omitting non-verbal elements (ibid.). Similarly, interviewing seems to provide a partial representation of the participants’ original experience. ‘Data collection is inescapably a selective process’ (Miles and Huberman, 1994). In this sense every aspect of the study involves a mediated practice. Since mediation is inevitable, transcription is not the first nexus of interpretation, as the data itself is already a mediated construct. ‘Rather, transcription is perhaps best thought of as a re-mediation of a mediated view’ (Gibson and Brown, 2009, p.125).

Cohen et al. (2007a) claim that there is no one ‘correct’ transcribing method but rather that this is defined by the purposes and usefulness of the study. In the present study all audio recordings were transcribed with accuracy, reflexivity and sensitivity in terms of what was said, using the participants’ exact wording and punctuation marks (full stops, commas, question marks, exclamation marks or capital letters for emphasis, etc.) in order to represent as much as possible the meaning that participants attributed to their words though speech. Moreover, because there always seems to be a potential for misinterpretation, the transcripts were double-checked against the original recording.

Prior to proceeding with analysis it is important to have a general analytic strategy (Yin, 1994). The present study mainly relied on the ‘most preferred’ (ibid., p.111) strategy of theoretical propositions. According to Yin (ibid., p.112) ‘the original objectives and design of the case study presumably were based on such propositions, which in turn reflected a set of research questions, reviews of literature, and new hypotheses or propositions’. The literature review of the dyslexia models and coping theories provided
a structure for data analysis. However, since such models/theories tend to be viewed as rival, the analytical strategy of ‘thinking about rival explanations’ (ibid., p.112) was also employed. Along with these general strategies, an inductive method of analysis was chosen on the basis of allowing new themes to arise (Benaquisto, 2008). Quite often the co-existence of inductive coding and theoretical propositions is perceived as controversial. However, the two processes are not necessarily opponent. Some scholars hold that claiming bracketing pre-existing knowledge so as to use purely inductive practices is not possible - given that researchers have in-depth knowledge of their discipline - and advise keeping in mind existing ideas while staying alert to the possibility of new emergent themes (ibid.). Hence although the present study had a ‘coding frame’ based on the pre-existing theories, inductive coding was preferred because of the paucity of research on the phenomenon of coping in the field of dyslexia.

In the present study, initially data from each case were carefully examined and analysed separately as if it was a single case study because as Stake (2006) claims a multiple case studies design is not as much a study of a phenomenon as a study of cases that inform the phenomenon. Coding involved four levels; the first three levels involved within case analysis for each case separately, whilst the fourth proceeded to cross-case analysis. All coding was conducted in the Greek language so as to avoid losing data due to possible translation inconsistencies. However the transcripts, concept maps and matrices that were included in the thesis were translated into English in order to facilitate the presentation of the findings and the data analysis methods and processes (e.g. appendices) after data analysis was complete. Coding resembled the inductive coding techniques proposed by Strauss and Corbin\(^\text{10}\) (1990 in Miles and Huberman, 1994). However, it would be a mistake to think that a grounded theory approach was employed. Rather the researcher developed a ‘different’ coding approach borrowing elements from the work of Strauss and Corbin (ibid.), as well as Miles and Huberman (1994). After all, according to some scholars, ‘coding and analysis of qualitative data cannot be systematised or taught. It is an interpretive process that necessarily involves creativity and subjectivity’ (Benaquisto, 2008, p.88).

\(^{10}\) According to Corbin and Strauss’s (1990 in Miles and Huberman, 1994) inductive coding method data are initially collected and transcribed. The written up data are reviewed line by line and labels or categories are generated and written beside or below the lines. Subsequently, labels are reviewed and included in broader and more abstract categories which can be attributed to several incidents. Qualitative data category cards can be then developed.
Preparatory to first level coding, the transcribed text lines were numbered and the right margins were extended in order to leave enough space for the subsequent marginal coding notes. Inductive coding began with close text reading and data being reviewed line by line. Consideration was given to the embedded meanings and the identification of text segments that hold meaningful units. Labels were generated for these segments and marked by hand in the right-hand margin. These labels were the first level codes and were attached to ‘chunks’ of text of varying size (Miles and Huberman, 1994, p.56), assigning descriptive information. First level coding has no interpretive intentions; rather it is open to the identification of multiple concepts - regardless of whether they had already been referred in literature - and so it operates close to the text using descriptive tags which in some cases come straight from the text. For example, Eugene\(^{11}\) mentions in lines 116-119 (see Appendix 3): “But I had one strength: I was persistent and my mum said so. I mean that even in difficult situations, I was stubborn, I tried hard, I did things and I coped effectively”. The first level codes assigned to the text were: ‘strength,’ ‘persistent character,’ ‘lots of effort’ and ‘effective coping’.

Second level analysis involved organising first level codes into broader, more abstract categories. Second level codes were interpretive, focusing on the meaning of the ‘chunks’. As seen in Appendix 3, second level codes were initially marked beside the first level code in the right margin, using a differently coloured pen to avoid confusion. For instance, ‘persistent character’ was subsumed in the broader second level code ‘personality’, whilst ‘lots of effort’ was subsumed in the second level code ‘coping strategies’. Subsequently, all first level codes accompanied by the accurate chunks of text and the line numbers were written by hand on different sheets of paper under second level code labels. Appendix 4 gives an example of two second level codes (‘personal characteristics’ and ‘peers/friends’) and their comprised first level codes, based on Eugene’s interview. Lines were included so as to allow for a top down reference to data, especially in subsequent levels of analysis. Therefore, data from each interview were re-organised in a file containing approximately 20 second level codes such as: demographic details, personality, diagnosis, situation characteristics, parents, school, university, educational system, work, society, leisure activities, dyslexia institute, peers-friends, coping strategies, support, practical implications, emotional...

\(^{11}\) In the present presentation of data analysis procedures Eugene’s case will be used as a typical example of within-case analysis for issues of consistency and clarity. Similar processes were followed for the coding of all six interviews.
implications, perceptions of the (dyslexia) situation, and perceptions of coping (see Appendix 5a). In the end, six files – one for each participant – were created (see Appendix 5b).

Moreover, while coding, reflective memos were produced taking the form of sticky notes (see Appendix 3). Memos included reflective notes about the properties of categories and the relationships among them. According to Groenewald (2008, p.505) ‘memos add to the credibility and the trustworthiness of qualitative research and provide a record of the meaning derived from data’.

Subsequently, in the same way to axial coding each second level code was examined separately looking for within-code central tendencies and alternative dimensions. This process identified the properties of each second level category and its relationships with its subcategories. For instance, in Eugene’s case the second level code of ‘coping strategies’ (see Appendix 6) were further divided into subcategories in reference to time (coping strategies in childhood, adolescence and adulthood), type (traditional, alternative, cognitive, emotional, survival, social, visual coping strategies, etc.) and field (coping strategies for school results, social status, reading, writing, personal aims etc.). Further, concept maps were used to display the representations of the concepts within each category and to explore the relationships among subcategories (Miles and Huberman, 1994). With regards to Eugene’s interview Appendix 7 visually presents second level codes such as ‘characteristics’, ‘family’, ‘dyslexia institute’ ‘perceptions of the situation’ and their subcategories or details related to them. For example, the second level code ‘characteristics’ was divided into subcategories reflecting different areas such as ‘reading’, ‘writing/spelling’, ‘vocabulary/oral expression’, ‘memory’, ‘improvement/evolution’ etc. In such concept maps, concepts were represented as nodes and relationships were depicted as lines or arrows that link the nodes.

The third level of analysis involved within-case exploration of themes; that is pattern codes which are even more abstract and inferential (ibid.). Themes explore the relationships between second level codes and examine whether they can fit into broader categories. At this level, labels - usually borrowed from theoretical propositions- were employed to describe the inferred themes (e.g. SELF, SITUATION, COPING STRATEGIES, SUPPORT). For instance, second level codes such as ‘characteristics’, ‘situational circumstances’ (timing, trigger, control, duration, etc.) and ‘implications’
(both practical and emotional implications) were subsumed under the superior theme of SITUATION. Coming back to the example from Eugene’s transcribed interview, the first level code ‘persistent character’ (lines 117-118) was subsumed to the second level code ‘personality’ which subsequently was included in the superior theme of ‘SELF’. In some cases existing second level codes seemed to be quite ‘strong’ and could stand as third level themes. For instance, the second level code ‘support’ emerged as a major issue that could embrace other second level codes (diagnosis, parental/familial role, dyslexia institute role, teachers’ attitudes, treatment methods and types of aid, society, epoch, etc.) and so it was elevated to a third level theme. On the transcripts, themes were marked at the right margin of the transcript using a different colour pen (see Appendix 3) and they were also developed in concept maps and matrices. For instance, a three level concept map was developed for each participant’s ‘coping strategies’ (see Appendix 8). Each level referred to a different life stage (childhood, adolescence, adulthood) and displayed coping strategies employed for different areas (e.g. personal aims, reading, foreign languages). Areas were displayed as nodes and coping strategies were linked to nodes with arrows. The type of coping strategy (e.g. alternative, traditional, survival) was also noted above each first level coping strategy. Moreover, line numbers were also used to enable a top down analysis. Such concept maps enabled a visual reading of data from multiple coding levels. For example, it was easy to observe that in adolescence Eugene (see Appendix 8a) mentioned the employment of eight coping strategies for writing (e.g. he used spellchecker when texting, he avoided handwriting by using PC word processors, he attempted to memorise spelling photographically) which belonged to different types of coping strategies (e.g. spellchecker, word processor → survival coping strategies, avoidance of handwriting → avoidance coping strategy).

Similarly, chronological matrices were used to represent in more abstract and theoretical way the different types of ‘coping strategies’ that were employed for different areas (e.g. school, reading, writing, social status) in childhood, adolescence and adulthood (see Appendix 9). For example, Eugene (see Appendix 9a) mentioned three alternative and one cognitive/emotional coping strategy for writing in adolescence whilst in adulthood he reported a much broader repertoire (four mainstream, one avoidance, two alternative, one emotional/cognitive and two survival coping strategies). This matrix is not concerned with frequency but rather represents the incidence of different types of coping strategies across time, both for different areas and holistically. For example,
although Eugene’s childhood seems to be dominated by traditional coping, an increasingly wide repertoire seems to be employed along with growing up (see totals in Appendix 9a).

Finally, during this third level of within-case analysis the concept maps that were developed for each major theme were stuck together so as to create a ‘holistic synthesis’ that allows the exploration the relationships among the themes but also among their sub-categories (see Appendix 10). Moreover, at this phase a pattern matching strategy was employed (Yin, 1994) so as to compare the empirically created patterns with the patterns suggested by theoretical propositions. For instance, the third level concept map in Appendix 10 that visualises Eugene’s coping with dyslexia displays four major themes (self, situation, environmental support and coping strategies) with a multiplicity of sub-categories (such as characteristics, diagnosis, dyslexia perceptions, emotional implications, practical implications, personal inclinations, and personality) which interrelate dynamically in multiple directions suggesting a transactional mode of coping. Therefore, the empirically created pattern seems to be generally in line with the coping suggestions of the 4 S system. At the same time though, the pattern matching strategy reflects new perspectives (e.g. dyslexia characteristics) that emerged from the inductive analysis and are not included in the theoretical proposition, as well as the absence of other 4 S theory elements in the specific case (e.g. not all eight 4 S situational dimensions were observed).

Before beginning a cross-case analysis such within-case concept maps and matrices were presented to participants in a process of member-check, so as to ensure that there were no misinterpretations and that data analysis represented the participants’ experience of coping with dyslexia.

Following the deep within-case analysis, a fourth level of cross-case analysis was conducted focusing on the exploration of patterns across cases and the construction of a coherent theoretical proposition. According to Miles and Huberman (1994) cross-case analysis has the advantage of enhancing generalisability and deepening understanding of the phenomenon under investigation. Cross-case analysis was based on ‘mixed strategies’ (ibid., p.176) for case-to-case comparisons leading to synthesis. More specifically, although analysis was mainly variable-oriented, case-oriented approaches were also employed to balance between theory-centred, abstract analysis and particular,
concrete patterns. For instance, the presentation of the research findings (see chapter 5) followed a variable-oriented approach based on the analysis of the major themes (self, support, situation, coping strategies). However, a case-oriented approach was also included to illuminate how such variables demonstrated in different cases. For example, following a comparative logic Appendix 11 represents the environmental sources of support that have been reported across cases as playing a role in coping. Moreover, Eugene’s case has been included in the support subchapter (see p.185-186) to illuminate abstract theorising about the ‘system of support’ with a particular real life example. Similarly, Stelios’s case has been included in Appendix 12 as a detailed case-oriented life-course example with regard to the evolving nature of the support system as time passes.

Thus, the in-depth understanding of each case separately as a result of deep analysis using matrices, concept maps and other displays was followed by a fourth level ‘stacking comparable cases’ strategy (Miles and Huberman, 1994, p.176) according to which case-level displays were stacked in across-cases displays allowing systematic comparisons among cases over specific issues. More specifically, concept maps and matrices of second level code families and third level thematic patterns were compared across cases, looking for similarities, contradictions, significant aspects, etc. Comparisons were facilitated by the utilisation of ‘meta-matrices’ and ‘meta-concept maps’ which were created by identifying common themes and ‘stacking’ of variables across all cases. ‘In this way the researcher retains both the detail of individual cases and partial but overall explanation of a number of cases’ (Burns, 2010, p.265). Meta-matrices took the form of time-ordered meta-matrices (e.g. the repertoire of coping strategies in different life stages, [see Appendix 13]) and case-oriented meta-matrices (e.g. the participants’ situational characteristics, [see Appendix 14]).

Finally, composite meta-matrices and meta-concept maps formed the canvas on which theoretical propositions were tested. For example, the cross-case comparison of third level concept maps regarding the ‘situation’ theme (see Appendices , 15b, 15c, 15d, 15e,15f and 15g) enabled the constitution of a meta-concept map (see Appendix 15a) on which the situation variables proposed by different theoretical models (e.g. the transactional 4 S system, the situation-oriented model, the person-oriented model or the interactionist model) were tested for similarities and differences. In this way it was examined which model of coping best fitted the meta-concept map which had emerged
from the data. Similar cross-case comparison and pattern matching strategies were employed with each major theme (e.g. support, coping strategies) separately, as well as with the holistic (synthesising all major themes) concept maps (e.g. Appendix 10), so as to examine if the 4 S system can, as an analytic tool, adequately explain the phenomenon of coping with dyslexia.

Figure 9: ‘Ladder of analysis’: the process of within-case analysis and cross-case analysis in four levels
To conclude, figure 9 displays all four levels of analysis as a ladder. The schema has been inspired by Carney’s (1990) ‘Ladder of Analytical Abstraction’ (in Miles and Huberman, 1994, p.92) and tends to represent adequately the whole process of analysis followed by the present study.

Quality of the study: issues of validity and reliability

The concepts of validity and reliability are of vital significance in positivistic research such as surveys and experiments, but in case study research these concepts seem to be problematic (Bassey, 1999). Briefly, reliability refers to the consistency and stability of results if the research was conducted again (Ward and Street, 2010) while ‘validity refers to the extent to which a concept is actually represented by the indicators of such concepts’ (Yue, 2010, p.959). Validity can be further analysed in a number of ways. For instance, Yin (2003) mentions three types of validity: construct validity, which is concerned with establishing the correct operational measures for the concepts being studied; internal validity, which is concerned with the relationships between cause and effect and external validity, which is concerned with the generalisability of research findings to broader populations. However, traditional positivist understandings of these concepts seem to be non-applicable in qualitative case studies that are interested in interpreting the richness of the case (Vulliamy and Webb, 1993 in Avramidis and Kalyva, 2006). A case study research is a study of singularity (Bassey, 1999) and primarily concerned with the uniqueness and the idiosyncracy of a situation - that is its strength. So, quantitative canons of reliability may be unworkable for qualitative research (LeCompte and Preissle, 1993 in Cohen et al., 2007a) and issues of external validity may seem meaningless (Bassey, 1999). Apart from the appropriateness of such standards in assessing qualitative case studies, the suitability of the terms is also contested (Golafshani, 2003; Yue, 2010). Lincoln and Guba (1985) offer the terms of credibility, confirmability, dependability, transferability consistency, applicability and trustworthiness.

Although the appropriateness of the concepts of validity and reliability in the domain of qualitative case study research seem to be challenged, this does not render the consideration of the notions as unimportant (Yue, 2010). On the contrary, one may
address concerns about the notions of validity and reliability within the boundaries of a specific research whilst preventing the invocation of nonapplicable canons (ibid.). So, it seems that some techniques may be suitably used in certain case studies to increase the quality of the study (Avramidis and Kalyva, 2006).

Without disregarding the broader discussion on the issues of validity and reliability in qualitative research, the present study employed the technique of member check (Lincoln and Guba, 1985) to increase accuracy and credibility. Research participants were asked to evaluate if the researcher had accurately understood and rendered their experiences (Maxwell, 1992). Member checking occurred both as an unofficial process integral to the primary data collection and as a separate official procedure following the data analysis (Sandelowski, 2008). As an embedded element of the data collection, the researcher asked the participants to verify if she had clear understanding of what they have reported by restating information or using prompt questions during the interview and summing up the main issues of the interview right after its ending. Member check as a separate official procedure occurred after data analysis had taken place. A second meeting with the participants was arranged during which they were asked to evaluate the main findings of their interview, clarify any fuzzy points, correct potential mistakes or misunderstandings, add further information, check the adequacy of the analysis and discuss over the final presentation of their experience of living and coping with dyslexia. Two reasons contributed to the selection of the technique of member check. First, it seems suitable for the purpose of the study to give priority to the personal perspective of the participants. Second, the technique of member check is prescribed by the ethical assumptions that prevail in this study. The use of member check empowers the role of the participants in the research by giving them the opportunity to have a word on the formulation of the final outcomes of the study, which has been a largely neglected tactic in traditional research (Avramidis and Kalyva, 2006).

Moreover, the study used the technique of person triangulation. According to Denzin (1989) person triangulation is a subcategory of data triangulation and involves the collection of information from more than one level of persons, including individuals and groups. The present study collected data from different individuals, who although sharing a common characteristic, inevitably hold unique experiences and situations. Nevertheless, in qualitative research triangulation does not aim for convergence, but rather it is interested in capturing a holistic view of the phenomenon (Farmer et al.,
Different sources of data are better seen as different pieces of the same puzzle; each one offering a unique perspective to the exploration of the phenomenon and contributing to the completeness of its understanding (Curtin and Fossey, 2007). Person triangulation in this study took the form of comparison and consistency checking of the individual’s perspectives across-cases.

The notion of external validity as conceptualised within the positivistic discipline to mean the generalisation of research findings to broader populations, seem to be problematic or even impossible in qualitative case studies (Yin 2003; Avramidis and Kalyva, 2006). The strength of case study designs is the in-depth investigation and the rich interpretation of a phenomenon in its contextuality and ‘generalisability is unattainable if this context specificity is to be maintained’ (Yue, 2010, p.961). However, Yin (2003) suggests that generalisability in case studies should not be taken as statistical but rather as ‘analytical’. In analytical generalisation the researcher can generalise particular findings to some broader theory, which in the particular study is the theoretical framework of the ‘transactionist approaches to coping with dyslexia’. The generalisation was not automatic but emerged as the result of a replication of findings across-cases. Although this study cannot claim statistical generalisability, findings are applicable to ‘fuzzy generalisation’ (Bassey, 1999). Fuzzy generalisation carries an element of probability and proposes that the findings of the research may be applicable in other cases but without any certainty. In this sense it is compatible with complexity theory assumptions of unpredictability. However, it also seems to coincide with the suggestion of replacing generalisability with the concept of ‘transferability’ in qualitative designs (Curtin and Fossey, 2007). Bassey (1981) argues that the findings of many traditional positivistic researches -which are considered generalisable due to the use of large samples- are seen by professionals (e.g. teachers) as being irrelevant to their daily life. Contrarily, a rich, in-depth and accurate description of a case may be seen as more relevant and useful. ‘The ability to relate to a case and learn from it is perhaps more important than being able to generalise from it’ (Wellington, 2000, p.96). Thus, there is the possibility that individuals with dyslexia, teachers or other relevant professionals will recognise their characteristics in the description and analysis of the cases provided by the study. In this sense, the findings from this study can be transferred and applied to other individuals with similar characteristics.
The study used a *case study protocol* and a *case study data base* to increase reliability. A detailed documentation of the collected data and the procedures followed to explore the multiple cases seems to facilitate the intention of other investigators to repeat the study and produce similar findings (Yin, 2003; Avramidis and Kalyva, 2006). The protocol provides a rationale for the chosen methodology; describes in detail the research processes; fully documents the methods of data gathering and finally, specifies the undertaken analysis process. Moreover, the method of *peer debriefing* (Lincoln and Guba, 1985) was employed. The supervisors of the study - both well experienced researchers - as well as a fellow doctorate student from the University were asked to analyse part of the data and then their analysis was compared with the analysis provided from the researcher so as to enhance reliability. Peer debriefing had been a dynamic and ongoing process throughout the study; from the conception of the topic, the conceptualisation of the rationale of the study and the planning of the design to the data analysis and presentation all fellow researchers were called to play the devil’s advocate (Bassey, 1999) and question with openness all theoretical assumptions, research procedures and outcomes.
Ethical issues and moral decisions are integral to the nature of research. It would be naïve to think of qualitative research concerns as being restricted to technical matters which are preoccupied solely with the quality of the produced knowledge. Apart from the methodological and epistemological dimensions, the choice of a qualitative design itself constitutes a moral decision and involves the resolution of a sequence of ethical dilemmas. Ethical issues tend to arise in all research stages (Miller and Brewer, 2003), varying from the selection of the topic and the planning of the research design, to the actual conduct of the study; the procedures of data collection, data analysis and data storage; the presentation of the findings, the relationships with participants, etc. (Cohen et al., 2007a). Qualitative researchers need to explore ‘the rightness or wrongness’ of their actions in relation to the people whose lives are studied (Miles and Huberman, 1994) and are expected to ‘do the right thing’ so as to protect fellow human beings (deRoche and deRoche, 2005, p.336). Such ethical considerations seem to be imperative in qualitative research for the reason that it is a dynamic process which often involves an intrusion into the most intimate and sensitive matters in peoples’ lives (Punch, 2000, p.281 in Grix, 2004).

However, acting ethically is not anymore merely a matter of the researcher’s personal initiative to behave in the participants’ best interest (deRoche and deRoche, 2005). The increased interest in the ethical aspects of conducting research has led to the establishment of ‘codes of ethics, ethical standards or guiding principles’ which contain rules about behaving properly (Yin, 2011, p.39). Professional associations, universities, colleges and other institutions that conduct research have developed their own codes of ethical practice as well as ethical committees that review research proposals to ensure that ethical issues have been considered and participants are protected from harm (Piper and Simons, 2005; Lodico et al., 2006).
Ethical guidelines and the associated committees draw upon *normative ethics* which are concerned with the norms of typical appropriate behaviour according to which people *should* perform (Newman and Brown, 1996; Perle, 2004). Actions that are axiologically considered as constituting good practice in life tend to be treated as *values* and transformed into *deontological duties* according to which professionals ought to behave (Bayliss and Thoma, 2008). For example, asking consent to include an individual in a research seems to be valued as an axiologically good practice because it supports participants’ right to autonomy and self-determination. Since consent is considered a respected value, researchers have the deontological duty to protect participants by asking their permission to involve them in research. ‘Values and duties are officially systematised as sets of norms of ethical action in Codes of Ethical Guidelines (e.g. British Educational Research Association [BERA] ethical guidelines) or they are embodied in legislation’ (ibid., p.164). Conducting research with people with special educational needs seems to demand extra care (e.g. in case the individual’s ability to provide consent is compromised) and ‘normative ethics attempt to cover this need by establishing new ethical norms’ (e.g. by establishing the value/duty of parental consent) so as to ensure that individuals’ rights are not violated (ibid., p.164).

Guidelines seem to be a very useful tool, especially for beginner researchers. However, ethical practice is not as simple as following a list of rules; rather the implementation of ethical guidelines very often involves ‘ambiguities, dilemmas and contradictions’ (de Roche and de Roche, 2005, p.337). A central purpose of ethical guidelines is to systematise moral practices and justifications in the form of universal rules and create a coherent systematic whole which can be applied to specific problems providing ethical solutions, but the universal applicability of ethical codes has been challenged. The model of deducting conclusions from general abstract formulations may be appealing but according to Small (2001) it is inappropriate for dealing with the complexities of the educational enquiry. McNamee (2001, p.312) notes that to some social scientists, ‘universalistic ethics is no more than a hangover from the preconceptions of modernity’. In the same sense, although usually perceived as absolutes, ethical codes in educational research are only relatively finished products subjected to revision (Small, 2001) due to the contextual and situational sensitivity of ethical practice even within the same cultural milieu (Preissle, 2008).
Moreover, a single set of ethical principles does not seem to be adequate because social and educational research is commonly multidisciplinary and demonstrates methodological variability (Small, 2001; Miller and Brewer, 2003). Thus, absolute normative guidelines for ethical practice ‘as influential as they have been, are incomplete sources for ethical decision making if researchers lack awareness of the meta-ethics that underlie how normative ethics is applied’ (Preissle, 2008, p.275). This does not mean that ethical codes are utterly useless but that ‘a codified practice is of very limited usefulness in arriving at ethical decisions,’ (Small, 2001, p.389) if the relationship between principles and particularity is not considered at a meta-ethical level.

Meta-ethics are concerned with the examination of the nature of moral norms, the procedures for their constitution and the underlying values that support certain actions as ethical (Bayliss and Thoma, 2008). In other words, meta-ethics’ attempts to explore conflicts among the underlying values of norms, deconstruct the meaning of values and conceptualise alternative ways of moral action (ibid.). In relation to dyslexia research meta-ethical discussion sets questions such as: Why do we consider individuals with dyslexia as a vulnerable SEN population that demands extra and/or ‘special’ ethical treatment? What defines vulnerability? Why should we perceive dyslexia as a pathological condition in the first place? Can our standards and values related to dyslexia research take a different form? What if we replace the notion of pathology with alternative concepts such as differentiation or individuality?, etc. The exploration of such meta-ethical questions tends to influence not only decisions in terms of ethical considerations but also the choice of methodological design and epistemological paradigm.

Therefore, before endeavouring to design the procedures of conducting the research, relevant work in the field of coping with dyslexia was reviewed and a variety of meta-ethical issues (e.g. the perceptions of dyslexia and the role of the individuals with dyslexia in research, the power relations between the researcher and the researched etc.) were examined, so as to decide the ethical stance that this research would adopt.

The literature review suggested that most research in the field starts from the premise that dyslexia is a pathological condition and focuses on what is ‘wrong’, ‘deviant’ or ‘deficient’ in the ‘dyslexic’ individual (see Figure 10). Giving priority to the exploration
of the medical aspects of dyslexia and the development of scientific intervention which ‘remediates’ the problem suggests a ‘miskinesis’ (Lowe, 2002) from the living individuals to an abstract notion of dyslexia. This unavoidably seems to generate ethical issues in relation to the power relations between the expert researcher and the deviant researched and the role of the participants in the research - passive subjects in need of remedy as opposed to active participants contributing equally with the researcher in the advancement of knowledge.

The same pathologising attitudes that see dyslexia as a neurological brain dysfunction support the perception of dyslexics as a ‘special’ population that is vulnerable due to the lack of ability to acquire literacy, highlighting the need for extra care and ‘sensitive’ treatment (through normative codes). The duty of ‘special’ treatment is supported by the notions of vulnerability and incompetence. ‘People are judged as being competent or incompetent, typical or atypical, normal or abnormal’ (Bayliss and Thoma, 2008, p.8) depending on their ability to demonstrate capacity. Dyslexics are ‘incompetent’ or ‘atypical’ in terms of literacy and possibly vulnerable in relation to the exploration of the intimate aspects of dyslexia. Hence, the researcher has the duty to protect participants from harm. Although according to normative ethics extra ethical care seems essential, a meta-ethical discussion of the issue suggests that starting from the premise that dyslexics are incompetent and deviant immediately raises significant ethical concerns for stigmatisation and possibly for patronising behaviours by people of authority (e.g. researchers).

However, it can be claimed that ‘competence’ and ‘vulnerability’ are relative and therefore debated issues in relation to the exploration of personal aspects of a disability (e.g. reporting on the lived experience of dyslexia). It is not always easy to identify where the line is between vulnerability and capacity to stand up for oneself and this is possibly reflected in the lack of consensus for standards to decide if a person’s participation makes him/her vulnerable. The case of dyslexia is not an exception; it is hard to pre-define competence, predict the degree of vulnerability or which aspects of the phenomenon may make the individual vulnerable, especially if the focus of research is on personal lived experiences and not simply on literacy efficiency. In such a case dyslexia tests (e.g. phonological awareness tests) seem inadequate to define competence for reflecting on personal experiences, whilst psychological tests exploring participants’ emotional competence are on the basis of general assessment and not strictly related to
the issue of dyslexia. After all, ‘tests tend to locate the incapacity in individuals, while the incapacity may be located in the societal values, as incapacity to accept difference’ (ibid., p.169). In other words it would be insufficient to ‘measure’ competence solely in relation to the individual’s degree of impairment in capacity - which is what tests do - (Appelbaum et al., 1999); rather, societal standards of competence and disabling environmental structures need be taken into consideration.

Since the notion of competence in relation to dyslexia seems to generate a variety of ethical concerns, the present study decided to stand out from the long research tradition that focuses on dyslexia as a problem demanding remedy and give priority to an alternative conceptualisation. The meta-ethical conceptualisation of the ‘roots’ of ethical dilemmas and conflicts as presented above is not restricted to a theoretical discussion; rather, it leads to certain moral choices which are expressed at the level of applied ethics. Applied ethics is concerned with:

‘the moral choices that have been made under the scope of an informed meta-ethical discussion on values and principles. After conceptualising the different perspectives that moral theories offer and the tensions between values, what will the moral choice be in the specific situation?’ (Bayliss and Thoma, 2008, p.170)

Therefore, it was an informed, situated moral decision on behalf of the researcher to adopt an alternative approach to researching dyslexia; that of dyslexia as a ‘situation’ or an ‘event’ happening in an individual’s life as opposed to merely being seen as a ‘pathological condition’, a ‘problem’, a ‘curse’ or even a ‘gift’, unless it was defined as such by the participants themselves. Similarly, participants were not seen any more as ‘incompetent’, ‘special’ (in a disabling form) or ‘vulnerable’ but were primarily seen as different individuals with different perceptions of their situations. Therefore, the notions of deviance and incompetence were replaced by the concepts of individuality and differentiation suggesting a shift in perspective. At this point it seems important to clarify that although the term differentiation may have been associated with mainstream teachers differentiating work for pupils who have ‘different’ needs, and so to be related to normative ethics, in the context of this study the terms of individuality and differentiation would were conceptualised as the qualities and the unique characteristics of a particular person that distinguishes them from other individuals, highlighting the primacy of personhood. In this view, ‘different’ does not suggest ‘special’ in a
normative sense. Rather all people are seen as special due to their difference from others; their uniqueness.

Conceptualising dyslexia as an ‘event’ or a ‘situation’ and dyslexics as different individuals is not an attempt to show that the perspectives of occurrence and differentiation are necessarily superior to the notions of vulnerability or competence, but provide a new alternative for conducting research (ibid.) in a field which so far has been dominated by medicalised traditions. Perhaps, some might claim that the replacement is simplistic. It should be acknowledged that relationships between values and notions are highly complex. However, such a shift of perspective at an ethical level is accompanied by changes in the conceptualisation and exploration of dyslexia at an ontological, epistemological and methodological level, which indicates the complexity of the shift. For example, exploring the phenomenon of coping with dyslexia within an ethical perspective of differentiation implied a different approach to the role of participants (e.g. active participants instead of passive subjects), informed the formulation of the research questions (e.g. attempts were made to formulate non-disabling research questions), influenced the choice of methodology (e.g. movement towards a participatory methodology and a qualitative approach such as multiple-case study design) and research methods (e.g. interviews instead of tests), as well as the definition of epistemology (e.g. dyslexia is not seen as an objective truth to be discovered but rather as a relative construct influenced by the meaning attributed to it by different people). Hence, such a shift of perspective at an ethical level tends to be accompanied by complexity and a series of implications that inform all levels of research, from the choice of topic and the formulation of the methodological design to the epistemological assumptions and the ontological conceptualisation of notions. After all, ethical and epistemological issues tend to co-emerge (Gunzenhauser, 2006).

Furthermore, in line with the meta-ethical discussion of the power relations between the researcher and the participants and the role of the later in the study, a relational ethics approach was adopted. ‘Relational ethics is a contemporary approach to ethics that situates ethical action explicitly in relationship’ (Austin, 2008, p.748). Acting ethically does not rely solely on oneself but rather is discovered in dialogue with others (ibid.). Relational ethics highlight the ethical primacy of relationships, communication and emotional engagement. Fidlers’ (1992 in Miles and Huberman, 1994, p.289) idea of relations ethics stresses the importance of issues of attachment, care and respect more
than compliance with normative agreements. The new ethical perspective signifies ‘a move beyond the rational objectivity of ethics’ and reflects the significance of emotional engagement as a means of understanding the individuals’ unique experience (Gadow, 1999, p.62). Relational ethics and feminist ethics of care seem to be important in qualitative research because ‘unlike most survey and experimental researchers, qualitative scholars learn what they seek to know by developing relationships with their participants’ (Preissle, 2008, p.277). Thus, the present study decided to move beyond the objective enforcement of universalistic ethical principles and adopted an ethical approach of care which assumes relationships of interdependence and mutual recognition, and respect between the researcher and the participants (Williams, 1999). Moral action was directed by the unique experiences of the individuals and the situational particulars in a process of dynamic negotiation between the researcher and the dyslexic individuals. In this sense it was hard to define ahead of time and with great certainty what ethical ‘precautions’ to take (Austin, 2008). Rather, certain ethical decisions were determined during the process of conducting the research in dialogue with the participants. For instance, the participants defined the frame and the depth of the interview with regard to sensitive issues by denying or avoiding answering certain questions and their decision was respected by the researcher.

Such an ethical stance implies a different perception of the power relations and the role of the participant in the research. The participant was not ‘an object to be known’ but an individual to care about, to listen to, to try to understand and communicate with (Sevenhuijsen, 1998). According to Miles and Huberman (1994) research taking a relational ethical approach stresses an equal status collaboration between the researcher and the participant, who tend to be perceived as ‘friends’. So far the moral concepts of friendship, loyalty and care have been marginalised (Verkerk, 2001) due to the dominance of universalistic ethical approaches (Parton, 2003). However, the participants of the present study were not random or unknown subjects but people with whom the researcher had friendly relationships prior to the conduct of the study. Therefore, they knew about the purposes and the context of the study and they were happy to actively participate in the interviews and reflect on the research procedures at all levels (e.g. they gave informant feedback on the adequacy of the 4 S model to explain their experiences, on the content and the style of interview questions and on the presentation of the findings through the process of member checks). As suggested in the methodology chapter, there may be ethical and methodological issues from conducting
research with friends. Goodson and Sikes (2001) suggested that due to the pre-existing relationship and the established power relations, friends-participants may hesitate to reveal personal information because such knowledge gives significant power to the researcher. However, the present study argues this is not an issue when the research is conducted within an ethical stance of care and relational ethics that discover ethical practice in dialogue with others. Unknown participants may equally feel reserved or even threatened (Hambridge, 2000) by a researcher who holds the academic knowledge and the exclusive management of the research which undoubtedly gives authority and power (Williams, 1995). Thus, the relational ethical stance of the present research attempted to avoid exploitive power relations by asking the participants to actively engage with the research processes. The dyslexic individuals involved in the study were neither seen as passive ‘subjects’ nor as merely ‘respondents’, implying a unidirectional research process (Oliver, 2003). Rather, emphasis was placed on the unique contribution of each of the participants who were also seen as collaborators and ‘friends’. Hence, the acknowledgement of the need to deal with issues of power between the researcher and the researched (Austin, 2008) - which tends to be overlooked in long-established research - led to an informed and applied moral decision which stressed the active role of participants in line with relational ethics (see Figure 10).

Besides ethical implications, the notion of relationship was (expectedly) accompanied by epistemological suggestions. As Gunzenhauser (2006, p.622) suggested, ‘all knowing occurs in relation, because it is through contact with knowing others that knowing claims emerge’. Moreover, the quality of the qualitative research seems to be dependent on the quality of the relationship developed (ibid.). The movement from an uneven relationship between ‘researcher and researched’ to ‘a relationship between collaborators and friends’ can be described at an epistemological level as a shift from ‘a relationship between knower and known’ to ‘a relationship between two knowing subjects’ (Code, 1995; Smith and Deemer, 2003). The conversation between the knowing subjects leads to new understandings, which seem to be the result of the communication of the necessarily partial views of the knowing subjects (Code, 1995). Therefore, relational ethics is accompanied at an epistemological level by scepticism about the researcher’s ability to get to know all that the participants know (Smith and Deemer, 2003) as well as the desirability of such intentions (Sommer, 1994 in Gunzenhauser, 2006) proposing an approach that makes no claims to objectivity.
Following the consideration of ethical dilemmas in relation to the conceptualisation of the notion of dyslexia, the role of dyslexic individuals in research and the use of normative deontological codes, it was decided that ‘acting ethically is not simply a matter of following a set of guidelines included in ethical codes’ (ibid., p.171). The present study chose to stand out of the modern era rational conception of ethics, which
is characterised by emotional detachment and objective application of universal principals as the best moral action (Gadow, 1999). Consequently, no ethical codes were borrowed and blindly enforced on participants because ‘the attempt to impose such (ethical) principles on others in the guise of ethics contradicts the notions of ethics itself, which presumes that persons are autonomous moral agents’ (Ladd, 1980, p.154 in Small, 2001). Rather, ethical codes (e.g. BERA) were considered as inspirational and aspirational documents (Small, 2001, p.404) and elements from codes were included in the research after problematising in a phonetic Aristotelian sense - that is being practically wise regarding when, where and how to follow the norms (Dunne, 1993).

Acting from a stance of differentiation, relational ethics and ethics of care suggested that priority should be given to the protection of the integrity and the emotional and psychological wellbeing of the participants. Although less evident, potential harm exists in social research too. ‘Social research, particularly that which involves in-depth interviewing or probing lines of questioning, may also force people to face aspects of themselves that they do not normally consider. This can result in personal agony for the participant’ (Miller and Brewer, 2003, p.97). It has been acknowledged by the study that asking participants to reflect on perhaps unpopular and unpleasant personal characteristics (e.g. poor educational attainment) may be a stressful experience. Hence, in order to protect the participants’ peace of mind, all meetings and discussions for the purposes of the research were conducted with discretion, within a friendly atmosphere and at a place and time defined by the participants. The researcher provided reassurance that the study does not attempt by any means to test or evaluate the professional life or the academic attainment of participants. The researcher also undertook a commitment to urgently stop the interviewing process if increased discomfort were to be observed. Moreover, it was explained to the participants prior to the start of the interviews that they had the right to decline replying to any questions they did not feel like answering or use the stop/pause button of the tape recorder at any time. In this way participants are given absolute control over the recording process (Oliver, 2003) and are protected from feeling stressed or uncomfortable when talking about certain issues. The ethical stance of the present study desired that participants express their opinion freely and take decisions for issues that concern them by engaging in a role of ‘active participation’ (Alderson, 2000).
Further, it was made clear that participation in the research is voluntary and that individuals could decide whether or not to partake according to their free will (Miller and Brewer, 2003), divested of any type of pressure. Besides having the right to refuse to take part, participants were eligible to withdraw once the research had begun for any or no reason (BERA, 2004; Avramidis and Kalyva, 2006). Thus, the present research acknowledged that informed voluntary consent entailed the possibility of ‘informed refusal’ (Cohen et al., 2007a, p.52) as an on-going process.

The study went on to acknowledge that participants shared intimate aspects of their lives and gave increased emphasis to the protection of the participants’ privacy throughout all the research stages. ‘The more sensitive, intimate or discrediting the information, the greater is the obligation on the researcher’s part to make sure that guarantees of confidentiality are carried out’ (Cohen et al., 2007a, p.65). Since the research involved face-to-face interviewing, guaranteeing anonymity was not possible; inevitably the researcher knew the participants’ identities (ibid.). However, promises of full and strict confidentiality were provided. No connection between personal information and identities was made publicly (ibid.). Rather, participants were assured that their names or any other personal details were not used. ‘Masking techniques’ such as pseudonyms for names of people were employed (de Laine, 2000) whilst other personal identifiers were either deleted or reported more generally (Frankfort-Nachmias and Nachmias, 1992). For instance, with respect to work, company names were omitted and professional positions were referred to vaguely.

Ethical considerations about protection of privacy were also extended to data storage and disposal. ‘People are entitled to know how and why their personal data is being stored, to what uses it is being put and to whom it may be made available’ (BERA, 2004, p.9). Data generated for the purposes of the present study (USB with mp3 audio material from the interviews, paper transcripts, signed consent forms, analyses etc.) were securely stored in a digital-key cabinet to which only the researcher had access. Participants were informed in advance about having the right to access their personal data after making a request, in order to make alterations, give clarifications, delete certain information or withdraw their data altogether. No participant could have access to the data of other participants and no third parties could intervene. The only exception was the researcher’s supervisors. Data were stored until the completion of the study and will be fully destroyed straight after the nomination of the PhD.
Potential participants were informed accurately, in detail, devoid of any deception and prior to commencing any interviewing about all the ethical considerations and arrangements mentioned above, as well as about the aims, the nature and the processes of the research. Informed consent was given in line with the peoples’ right to freedom and self-determination (Cohen et al., 2007a) and the ‘right to know’ about the project before actually assenting to take part (Oliver, 2003). Besides, informed consent is of major importance if participants are going to be exposed to any stress or if invasion to private aspects of affairs of individuals is probed (Frankfort-Nachmias and Nachmias, 1992; Cohen et al., 2007a). Information about the present study was presented in an easily understood manner, avoiding technical research jargon and sophisticated academic language (ibid.) and was provided both orally and in written form (see Appendix 1). However, participants were encouraged to ask for further details about the research or clarifications about specific questions while interviewing.

The informational letter was accompanied by a written consent form, as an agreement which represented the relationship cooperation between the participants and the researcher and as verification that rights and responsibilities in relation to the research were fully understood (Avramidis and Kalyva, 2006). Written information and consent forms were distributed to participants in meetings prior to conducting any interviews, giving enough space for thought and consideration. The researcher’s details were also included in the document and potential participants were encouraged to contact for clarifications, or if they had any further enquiries. Finally along with providing extra explanations, oral informed consent was employed as a means of reassuring all participants - including those with severe reading difficulties - that they could have access to the content and the details of the study.

To sum up, ethics was given careful consideration and informed all levels of the present study; from the formulation of the research questions and the conceptualisation of the participants’ role to the selection of an appropriate methodological design and the definitions of epistemological assumptions. The meta-ethical discussion of ethical issues suggested that the mere use of normative approaches is inadequate to resolve underlying ethical conflicts. Consequently, ethical codes were used as an inspirational guide in line with the notions of differentiation and relational ethics which emerged
after a deep-thought negotiation of the ethical dilemmas with regards to the issues of competence, vulnerability, stigmatisation and power relations.
The purpose of this chapter is to present the findings of the analysis. Data analysis suggested that there are four major sets of factors which are likely to influence an individual’s attempt to cope with dyslexia: self, situation, support, and coping strategies. The four themes are presented in different subchapters. Moreover, each thematic subchapter separately and ‘in unison’ with others happens to respond to different research questions (e.g. the situation subchapter addresses Research Question 1, support subchapter addresses Research Question 2, all four factors respond to Research Question 4, etc.).

Moreover, it should be stated that although the four themes originated from the 4 S system due to its employment as a theoretical proposition, they indeed emerged as central elements of the analysis with regard to the process of coping with dyslexia. As was mentioned in the methodology chapter, Schlossberg et al.’s (1995) model was employed as a loose guide so as to allow data to speak for themselves. Therefore not all elements of the transitional theory will be found in the subsequent analysis. This seems to be partly a result of the change of the original purpose of the theory. Transitional theory was designed to provide help to individuals who were moving in or through a transition within a counseling discipline. However, in the context of the present study it was tested as an analytic tool without any interventional intentions. Hence, the three parts of the coping process (approaching transitions, taking stock and taking charge) could not be examined as a sequencing process. Rather, they were integrated in the holistic framework of the 4 factors reflecting participants’ past experiences. Data analysis suggested that any attempt at separate exploration of the parts would result in unnecessary repetitions. For example, approaching transition elements (the type, the context and the impact) were examined as integral parts of the situation and the support chapters.
Finally, although Schlossberg et al. (ibid.) begin with the exploration of the ‘situation’, the methodological and ethical approach of this study suggested that it would be more appropriate to give priority to the individuals who cope with dyslexia. Therefore, presentation will start with the ‘self’ factor.
A. SELF

The self variable refers to personal ‘baggage’ that an individual brings into the transition. Self includes personal, demographic and psychological characteristics. However, before endeavoring to the cross-case presentation of these characteristics, it seems important to present briefly the protagonists of the present study.

The participants

This study consisted of six adults, four male and two female. Andrew was the oldest participant, 32 years old. He worked as an art director in an advertising company in Athens. Andrew studied in a technical lyceum\textsuperscript{12} specialising in graphics. After school he took courses at a private college of arts in Athens and then moved to the UK to do a Bachelor degree in Illustration and a Master degree in Visual Communication. It was his master’s tutors at university that suspected dyslexia, and so Andrew received an official diagnosis of dyslexia at the age of 22. His parents, who were concerned about his school progress, had tested him when he was still a child but he was misdiagnosed as ‘lazy’. He described himself as a ‘visual’ learner and a persistent personality who sets goals.

The second participant, Nestor, was 28 years old when the interview was conducted. At that time he was a PhD student in Environmental Taxation and Regulation at a UK University. He holds a Master in Economics from the same university and a Bachelor in Agricultural Economy and Development from the University of Agriculture in Athens. Similarly to Andrew, Nestor did not receive a diagnosis of dyslexia until he moved to the UK for his masters. Although his parents were highly concerned about his education, they never suspected dyslexia. In terms of personality he described himself as social, persistent, stubborn and smart.

\textsuperscript{12} Technical lyceum is a secondary school for students between 16-18 years old specialising in technical subjects.
Although the eldest participants grew up as non-dyslexics, the rest of the participants received diagnosis. Eugene received an early diagnosis at the age of eight and attended regular lessons at a dyslexia institute for two years. He was 23-year-old and at his final year in the Accountancy school of a Technical University (TEI) when the research was conducted. At the same time, he worked in the family business. His post involved communication with the clients, which he found fascinating. As a student he attended a mainstream primary school and middle school but graduated from a technical lyceum with specialisation in business management. In terms of personality he portrayed himself as persistent and rational, following his personal dispositions, setting goals and having control over situations.

The fourth participant was Stavros, Eugene’s younger brother. When the study was conducted Stelios was 20 years old and studied Business and Management in a TEI near Athens. Similarly to Eugene, Stelios attended mainstream primary school and middle school but graduated from a technical lyceum specialising in management. He received an early diagnosis of dyslexia at the age of seven, and had two years of specialised treatment at a dyslexia institute. He described himself as cool, self-aware, radical and uninterested in studying.

Hannah was the older female participant. She was a 23-year-old undergraduate student in Civic Foundation works at the TEI of Athens, when the study took place. She attended mainstream education throughout her schooling. Diagnosis came at the age of 11 after long and intensive family efforts. Institutes could not identify dyslexia due to the systematic literacy work done by Hannah’s mother. Contrary to the other participants, Hannah quit specialised treatment straight after the diagnosis because of the excessive psychological pressure. In terms of personality Hannah suggested having low self-esteem in childhood and adolescence, being introvert, but also agile, and strong on visual processing.

Finally, Dianna was a 19-year-old student in a state hairdressing school when she participated in the research. Dianna graduated from a general/mainstream lyceum\(^{13}\). Diagnosis occurred a bit late - when she was 15-16 years old - because of family issues.

\(^{13}\)Mainstream or general lyceum is a secondary school for students between 16-18 years old providing general education.
After diagnosis, Dianna attended lessons and psychological sessions at a specialised state institute. Dianna described herself as a visual learner, persistent and willing to study but discouraged by constant failure. She claimed to have a social and genial personality that was pressured to become more introvert due to the social prejudice.

Although brief, the profiles of the six adults that participated in the study seem to provide an essential introduction to ‘self’.

1. Personal and demographic characteristics

Goodman et al. (2006) claimed that personal and demographic characteristic such as gender, ethnicity, age and life-stage, state of health and socioeconomic status tend to influence personal perspectives towards life. With regard to the phenomenon of coping with dyslexia, analysis suggested that some factors were more critical than others.

Gender

To start with, literature in coping with dyslexia (e.g. Alexander-Passe, 2006) has suggested differences in relation to gender. However, the limited sample and the qualitative nature of the present study did not allow any fixed statements in relation to gender. Even suggestions for central tendencies with regard to gender seemed to be underpinned by the factor of individuality. For example, although a rich and stable avoidance coping strategies repertoire was reported by Dianna (see Appendix 13), coinciding with the literature about females, Stelios reported employing a wide variety of avoidance coping strategies too. In the same way, although girls are traditionally expected to utilise person-focused emotional coping strategies, in the present study male participants reported a rich person-focused repertoire of emotional and cognitive coping strategies. In fact, the majority of such coping strategies were mentioned by Eugene and Stelios (see Appendix 9a, 13 and 16) and so, it seems that individuality and personal circumstances played a role here too (e.g. the individuals were brothers and attended the same dyslexia unit, the same school and the same university). Actually, data analysis highlighted the factor of individuality suggesting that diachronically all participants used all the different types of coping strategies in different ‘syntheses’ (see Coping strategies, p.237-239 and Appendix 13). Therefore, any attempts for definite proposals
tend to be inappropriate and risky due to sample limitations and the qualitative nature of the research.

**Age and Life-stage**

The average age of the participants was 24.5 years old, varying between 32 and 19 years. However, this study tends to agree with Goodman et al.’s (2006) suggestion that life stage may be a more useful concept than chronological age in transitions because chronological age is a relative concept in reference to maturity, psychological and social age. Analysis suggested that in the case of dyslexia, life-stages seem to chronically coincide with important socio-educational events that are associated with changes in literacy efficiency (e.g. childhood coincides with the primary school period and the first systematic literacy engagement whilst adolescence coincides with middle school and lyceum years that gradually increase the literacy demands). Therefore, life-stages emerge as a useful concept in the exploration of the phenomenon of coping with dyslexia. Still, it needs to be acknowledged that individuals follow their own pace of aging and their coping does not necessarily coincide with chronological conventions.

As will be explicitly presented in the subchapter regarding coping strategies and in Appendices 9a, 13, 16 and 17, the system of coping strategies is not a stable entity; rather it tends to evolve over time. Different life-stages seem to be characterised by different coping strategies syntheses (see Coping strategies, p.237-239). Such differentiations across life-stages seemed to be a result of multiple factors which were correlated to time, such as differences in personal levels of maturity that come along, aging, different degree of control over coping (see Self, p.146-148), differentiations in the nature of dyslexia in terms of symptoms (see Situation, p.160-161), but also different environmental demands in terms of literacy and differences in support systems that come along (see Support, p.186-189 and Coping Strategies, p.240-244).

Generally speaking the notion of ‘time’ and ‘life-stage’ together emerged as a very important factor in the exploration of the phenomenon of coping with dyslexia. Coping evolved because dyslexic individuals, their environment and the nature of dyslexia itself also changed over time. Therefore, expecting a linear mode of coping that would be effective for all different life-stages and contexts seems to be a naïve approach to the issue.
Ethnicity and Culture

In terms of ethnicity, all participants were Greek, and so no direct comparisons can be made in reference to other nationalities. In this sense ethnicity and cultural background did not seem to be significant variables with regard to coping with dyslexia in the present study.

However, it should be mentioned that the eldest participants were educated both in Greece and the UK and made comparisons between the two educational institutes in terms of awareness and support. Although this issue will be explicitly examined in the Support subchapter (see p. 200-201), in this section it can be briefly mentioned that both Nestor and Andrew received an official diagnosis of dyslexia by their UK universities, which implies a difference in teachers’ expertise and support. Despite the potential irregularities, the UK universities adopted a social model of support providing system modifications so as to help students cope. Contrarily, the Greek educational system seemed to deliberately ignore the issue.

In the same sense, the data analysis suggested that all participants agreed that the modern Greek society was a source of exclusively negative support, characterised by lack of consideration, lack of interest, unconstructive comments and attitudes. For example, Andrew mentioned that his colleagues cannot understand the difficulties behind the label dyslexia and Dianna claimed that there is “social racism towards dyslexia”. Data analysis suggested that all participants without exception expressed the immediate need for increasing awareness campaigns. “In Greece, society should accept dyslexia, eventually, and get informed…” said Hannah.

Thus, ethnicity in terms of origin may not play an important role in relation to coping in the present study, but nationality in terms of social customs seem to be an important factor that needs to be taken into consideration. More details about the role of Greek society and the Greek educational system with regards to dyslexia can be found in support subchapter.
**Socio-economic status**

As far as socioeconomic status is concerned, it seems that all participants belonged to middle-class families, although there seemed to be variations in family wealth. It is important at this point to clarify that reference to family’s status instead of personal status was proclaimed by the significance of the family’s role during schooling but also because most of the participants were still financially dependent or supported by their family.

Coming from a Greek middle-class family implied an increased value towards education as the key to financial and social climbing. It is perhaps no coincidence that regardless of the literacy difficulties, five out of the six participants managed to pass to higher education, attending either Technical Universities or Highest National Universities. For example, as was already mentioned, Hannah took undergraduate courses in Civic Foundation works at the TEI of Athens whilst Nestor did his bachelor in Agricultural Economy and Development at the Agricultural University of Athens and then continued his studies in the UK with a Master degree and a PhD. In Nestor’s case failure to attend higher education was not an option. Passing to university “was a matter of persistence and pressure. It started from my parents and then emerged from me; I had to be a good student, I had to study. My parents were not unconcerned; ‘OK he does not get on well with literacy, he’ll become a plumber, a… whatever’. I had to get educated.” said Nestor. Thus, being well-educated seems to be highly valued by middle-class families in modern Greek society and this is possibly the reason why the families of all participants of this study provided extensive support (e.g. personal assistance with school-work, private lessons at home, support at dyslexia institutes).

The increased value attributed to education is perhaps more apparent in a family’s willingness to cover the full expenses for private education in terms of complementary support during both schooling and university studies. For example, Andrew took courses at a private college of arts in Athens and then moved to the UK to do a Bachelor degree and a Master degree. Stelios argued that even if a family cannot afford a dyslexia institute “parents should find a second job to help or should come up with something else”. An extended analysis of the role of family as a source of support can be found at Support subchapter (p.191). However, at this point it seems important to mention that the highly valued ‘virtue’ of education in modern Greece seems to
contradict with the general public ignorance of dyslexia and the unconstructive societal attitudes towards individuals with literacy difficulties.

**Health status**

In the context of this study health status was suggested to affect coping with dyslexia only in one case. Eugene faced a serious health issue that made him stay in hospital for a year and affected his attempts to cope with dyslexia. More specifically Eugene said: “I had already lost a year because of my (health) problem and this made me think differently,” and “it forced me to mature, because it was a very serious problem and helped me get over many other issues which were related to dyslexia”. Thus, although some may have expected adverse outcomes, it seems that in some cases a health issue “can make you stronger”, as Eugene suggested, and contribute to coping with dyslexia. Nevertheless, since data related to this issue are limited, any further assumptions entail a potential for fallacy.

### 2. Psychological characteristics

**Personality**

In the Coping Theory literature the debate is still on-going between stable personality traits and situation-determined responses as the dominant way of coping. The findings of the present study, though, suggested that some personality characteristics seem to facilitate coping, without making any claims for definite one-to-one correspondence with certain coping responses. For example, Nestor suggested that being outgoing has helped him cope with the social aspects of dyslexia but also with the pressure he received from traditional teaching methods. “I had good social status in class. I was always the president of the class. It was a matter of personality. I knew that my peers weren’t upset about me because I couldn’t read well, but about the teacher who put too much pressure on me.” Similarly, Stelios suggested that being ‘cool’ and relaxed helped him cope with the social, emotional and educational aspects of dyslexia. He claimed that there may be social and psychological implications when reading in public “unless
you are *zamanfou*[^14]… Individuals with dyslexia stop having problems with reading and talking, when they don’t care anymore*. Similarly, “living in an ivory tower” helped Andrew with the social and psychological aspects of dyslexia. Persistence seems to be another personality characteristic that according to the participants contributed to their coping efforts. “My character definitely played a role in coping. I’m extremely persistent; stubborn!” said Nestor, who seemed to attribute his success to resilience and constant efforts. Likewise, Andrew said: “I tried to fight; I didn’t want to give up because of dyslexia”. Stressing personal dispositions (e.g. visual or auditory types of learning) seemed also to be an effective way of coping. “I believe that in order to improve you shouldn’t do what you ‘must’, but you need to follow your own dispositions” said Eugene who ‘exploited’ his inclination in mathematics so as to cope effectively with literacy and school expectations. Other participants took advantage of their strengths in visual processing and coped effectively with literacy by employing pictures, schemas, concept maps, symbolic writing, etc. A more detailed reference to personality characteristics such as persistence, dispositions and preferences can be found in the person-focused coping strategies section (see p.226-227).

**Maturity, awareness and sense of control:**

Analysis suggested that life-stages and aging play an important role in coping with dyslexia because of their association with maturity and self-awareness. Although maturity seems to be a personal issue and levels of maturity tend to be different from individual to individual both in terms of quality and age, numerical measurement of the levels of maturity was neither among the purposes of the present study nor applicable to its qualitative nature. Interview data though suggested a relationship between coping with dyslexia and personal growth, self-awareness and autonomy that come along with aging.

More specifically, data analysis suggested that in childhood participants were not aware of their situations. For example, Stelios mentioned: “There was no chance I would have realised I was dyslexic in the 1st or 2nd grade of primary school”. Similarly, Eugene stated: “You cannot suspect dyslexia on your own; I was very young. When you are eight or nine years old, if somebody won’t tell you, you don’t realise it.” During this

[^14]: The term is derived from the French phrase "je m'en fous" (foutre). It is adopted into everyday Greek slang vocabulary and is roughly equivalent to the English 'I don't care'.

period most of the participants did not employ any specific coping actions because dyslexia was not a clear issue. Their coping with school expectations was dependent on significant others, mainly parents and specialists. Eugene suggested that when someone is young “the environment plays the most important role; not self”.

For most participants realisation of ‘dyslexia’ came after diagnosis but as a gradual process. “When I moved to middle school I started to understand more. I realised what I should do. Before, I saw it (extra support) as a ‘must’ because others tell me so,” said Eugene, who also suggested that “dyslexia is understood gradually, after two or three years”. Dianna argued that “when you are young you don’t know much; you can’t understand much. Nowadays, being older, I’ve learned more about coping”. Andrew claimed that while growing up he realised which methods help him learn more efficiently and nowadays he makes use of these methods so to cope with dyslexia. Therefore, aging and personal growth seemed to be accompanied by a deeper understanding about dyslexia and coping, which affected the choice of coping strategies (see Coping Strategies, p.240-242).

Moreover, maturity and aging seemed to be associated with different levels of autonomy and control. More specifically, findings seem to coincide with Kincade’s (1987) theory about individuals’ autonomy which suggests that different life-stages are accompanied by different levels of independence and responsibility over coping. Participants reported that childhood is a period of dependence on external agents (parents, teachers, dyslexia experts) for coping with their situations. As seen above, Eugene suggested that the environment is ‘stronger’ than self during this phase, while Stelios stated: “At this age there is no denial. You have no choice but to work hard”. With growth though, comes a period of counterdependence during which agents and dyslexic participants ‘negotiated’ the responsibilities over coping. During this period participants tended to assert their ‘authority’ over coping, and agents decreased their control. For instance, Stelios stated: “In the first grade of middle school, with lots of doubts, my parents started letting me study on my own, because they knew that I didn’t like them supervising me. Up to this point, my mother helped me study six hours per day.” After this change in control over coping, Stelios altered his coping. “Dyslexia bothered me and I worked on it till second grade of middle school. Then I was in a world of my own. Basically attending or skipping school was the same to me”; and “I announced to my parents that there was no chance I would spend my time studying so
many hours again,” reported Stelios, entering gradually a phase of independence and taking over control from his parents in reference to coping with his dyslexia situation. Therefore, early adulthood seemed to be the main period of independence during which participants reported having full responsibility for their coping and being free to select from a vast repertoire of coping strategies the most appropriate for them. However, according to Kincade (ibid.) fully mature individuals tend to move to the final phase of interdependence during which mutual reliance of connections and power relation is recognised. For instance Hannah sought support for her dyslexia by attending regular sessions with an expert. “I went to a psychologist and he gave me an exercise for my letters and numbers and I’ve started writing on pages with little boxes. And so, I’ve seen improvement with my handwriting,” said Hannah.

Therefore it seems that the different life-stages are accompanied by different levels of independence and control which inevitably influence the choice of coping strategies. This issue will be thoroughly examined in reference to the types of coping strategies in the relevant subchapter (see Coping Strategies, p.241-242).

**Commitments**

Data analysis suggested that commitment to the fulfillment of certain goals tends to influence coping with dyslexia. For instance, Nestor claimed that after a point he perceived studying in higher education not as a parental pressure but rather as a ‘personal obligation’. “It started from my parents and then it emerged from me,” said Nestor who devoted himself to his studies and managed to do a PhD. Similarly, Andrew suggested that he managed to cope with the expectations of his master’s because of his love and devotion to his subject which motivated him to study. “It is true that I haven’t studied more in my life than I did during my masters”; and “I studied eight hours per day but I liked to and I improved in writing too.” He said: “it was my subject”. Moreover, Andrew was committed to graduating: “I didn’t have an alternative. Either I’d quit or I’d continue. I continued because I liked what I was doing”. Eugene also claimed that he achieved to pass to the school of his choice because he set it as a personal goal. “As I’ve told you I’m a person who sets goals. If I set a goal I will achieve it, as I’ve done”. “Call it commitment, call it stubbornness, call it what you wish. I like having this characteristic. It has benefitted me in my life in all areas,” said Eugene. Therefore, it seems that commitment to a goal which involves literacy
encouraged participants not only to cope with certain environmental demands but also to improve literacy-wise.

3. Conclusions
Summarising, data analysis suggested that self is a significant factor in coping with dyslexia, because due to differences in gender, age, health and culture, as well as personality, psychological maturity and a sense of control and commitment, individuals with dyslexia follow different coping routes. In the context of the present study, factors such as locality, optimism, spirituality and resilience (Goodman et al., 2006) were not mentioned by participants as important factors. Instead personal appraisal emerged as a significant function of self. However, due to its close relationship with the factors of situation and coping, it will be developed explicitly in the relevant chapters.
B. THE ‘DYSLEXIA SITUATION’

This subchapter explores the ‘situation’ factor in relation to the individuals’ coping. Scholossberg et al. (1995) suggested that situation relates to the ‘objective’ characteristics of a transition. However, it should be mentioned that it includes judgment in the form of personal appraisal. Therefore, in the context of the present study the situation subchapter examines the ‘issue’ or ‘phenomenon’ of dyslexia as this is perceived by the individuals experiencing it and therefore, it can be seen as a response to the 1st Research Question\(^\text{15}\). Scholossberg et al. (1995) suggested that situation consists of eight dimensions which are likely to play a role on the individuals’ ability to cope with a situation that involves change. However, the data analysis of the present study suggested that all dimensions may not be observable in all cases of dyslexia. Moreover some of the dimensions (e.g. the sense of control over the situation) tend to change in different periods and therefore they may be better conceptualised as fluid and flexible rather than stable across lifespan.

Furthermore, although the 4 S model focuses on the eight dimensions, the data analysis of this study suggested that in the case of dyslexia the ‘nature’ of the situation also needs to be seriously considered, because of the great variation of characteristics across individual cases (see Appendix 14) and as time passes. Additionally, in the case of the dyslexia the nature of the situation seems to be central because these characteristics tend to be the basis of further implications for individuals. ‘Implications’ is perhaps another term for Goodman’s et al. (2006) ‘impact’ which was examined in the approaching transitions part. The term, implications, was preferred on the basis of it sounding less strict and direct in comparison to the powerful, linear effect of the term impact. It would perhaps be innocent to think of the association between dyslexia characteristics and implications as a linear cause and effect relationship. Data analysis suggested that characteristics interact dynamically with the circumstances of the situation (e.g. trigger,

\(^{15}\) How does the ‘dyslexia’ situation demonstrate and what role does it play in the everyday life of six Greek adults with a diagnosis of dyslexia?
timing) and the environment (e.g. perceptions and responses) and co-construct implications for the individual both on a practical and personal level.

In fact, it can be suggested that the characteristics are ‘neutral’ before meeting the environment and it is the dysfunction to social demands that makes them ‘problematic’. For instance, Eugene and his family thought that his situation was ‘normal’ until his teacher announced that he might be dyslexic. “If you don’t know (about dyslexia), you don’t understand the symptoms. We thought everything was ok. My mum was helping us with studying. It was a bit difficult because we couldn’t memorise but my mother thought that every child disliked school and studying. We didn’t think there was a problem” said Eugene. Therefore, it was not until the teacher suggested that there was a problem that the characteristics became ‘unspecified difficulties’; and it was not until a diagnosis took place that the unspecified difficulties became ‘dyslexia characteristics’ forming a whole new situation. Data analysis suggested that it is usually a school’s literacy expectations that transform initially ‘neutral’ characteristics to non-specifically ‘problematic’ and then to ‘dyslexic’ (see Figure 11). For instance, phonological awareness capacity is not problematic on its own but possibly becomes ‘inefficient’ as soon as it meets text decoding expectations, generating implications for the individual and a new situation that demands dealing with.

![Dyslexia situation diagram](image)

**Figure 11: Process of transformation of ‘neutral’ characteristics into ‘dyslexia characteristics’**.

Thus, it can be suggested that in the case of dyslexia the examination of the situation should not be restricted to the eight 4 S dimensions, but the nature of the situation and implications should be co-examined in a dynamic whole.

However, before embarking on the analysis of the nature of the situation it seems important to mention that in the present study we are not necessarily dealing with ‘dyslexia characteristics’. Although all participants had dyslexia statements, diagnosis did not occur for everyone at the same age. In the case of the two older participants,
dyslexia diagnosis was made in adulthood, whilst younger participants received diagnoses in primary school or gymnasium\textsuperscript{16}. As a result, the latter participants were dealing with dyslexia characteristics, whilst the former - at least during the crucial school period - were coping with ‘unspecified’ characteristics. Therefore the analysis will focus on the personal characteristics as these appeared to the specific participants because what is of more interest is the ‘personal experience of a dyslexia situation’ and not some general, abstract label of dyslexia.

The next section analytically presents the characteristics of the situation, followed by a critical commentary. Then, the eight 4 S dimensions are examined whilst the last section refers to the factor of implications.

### 1. Characteristics of the situation

To begin with, participants reported characteristics related to areas such as reading, spelling and writing, memory, phonological awareness, oral expression, concentration, foreign language acquisition and fine movements coordination. Apart from the difficulties, all participants reported having certain strengths such as strong visual perception, photographic memory, practical thought and remarkable thinking agility in perceiving complicated concepts.

It seems important to mention that there was great variability of characteristics across cases. In fact, even the most predictable characteristics such as spelling difficulties did not seem to be given. For instance, Dianna said: “I was very good at spelling… I didn’t make any mistakes; they told me that I was an exception; usually children with dyslexia make many spelling mistakes. I didn’t”. Furthermore, the degree of severity and the intensity of characteristics seemed to differentiate across cases. Even in cases where participants mentioned the same characteristic as their major difficulty, the degree of difficulty seemed relevant because it was based on individuals’ personal appraisals of the lived experience. However, the accurate measurement of the degree of intensity of a characteristic is neither possible (because adults reflect on past experiences) nor the focus of this study. What is of more interest, is the personal insights about these characteristics.

\textsuperscript{16} In the Greek educational system the gymnasium is a middle school for pupils aged 13 to 15.
Thus, according to the participants' perspectives the characteristics relating to their situation were as follows:

**Reading**

All the participants reported having difficulties with reading, even if for some, reading was not the main area of difficulty. Reading difficulties took different forms for different individuals such as difficulties with accuracy, fluency and reading speed. For instance, Nestor said: “I always had problems and even now I read very slowly in comparison to others; both in Greek and in English”. Similarly, Eugene mentioned: “the speed is slow and I make mistakes”. In terms of accuracy Andrew stated: “many times I realise that the text says something different to what I’ve read”. Stelios reported extreme difficulty in fluency: “I used to stutter and syllabify words”. Participants mentioned that accuracy difficulties occurred because they were guessing words based on visual signs or the anticipated meaning of the text instead of actually reading. “The difficulty in reading, in my case - as I realise now - came from the fact that from the initial letter of the next word I tried to understand which word it was. I didn’t read, I guessed” said Nestor.

Difficulties such as those mentioned above tended to affect reading comprehension. For example, Andrew said: “I lose the meaning of some things. I may receive an email which says ‘send this’ and I won’t read ‘send’ but only ‘this’ and so, I will never send it”. Likewise, Hannah reported having difficulties with text processing. “When I don’t have anyone to show me the key points, I am lost in the text”. Participants seem to associate difficulties in reading comprehension to reading out loud. Nestor stated: “Even today if I read out loud I will never get the meaning. I must read silently and very slowly. (When I read aloud) I am more concentrated to decode correctly rather than to understand the meaning and so, many times I lose the meaning”. In opposition “If you are dyslexic and you read silently, you read fluently” claimed Stelios. The presence of an audience also seems to play a role in reading. “Dyslexics read fluently out loud, when they are alone”, said Stelios.

As far as the ‘evolution’ of the characteristic is concerned, it does not only differ from individual to individual but also fluctuates across a timeline. Although most participants
seemed to have improved in comparison to the past, reading was still an issue. There was also a case of deterioration. More specifically Hannah said: “my reading has become worse; In the past I used to miss a line, now I miss whole paragraphs. So, it is a thing that ‘gives you up’ if you give it up”. The issue of constant drilling was also mentioned by Eugene: “There was a period when I read regularly and it improved. Then I stopped and the reading problem became observable once again”. Thus, it can be suggested that progress in reading is not linear and should be not taken for granted.

Writing

According to the analysis, all participants without exceptions referred to some kind of writing difficulty such as in spelling, handwriting, grammar and text composition. For instance, Stelios stated: “I had a serious problem, I didn’t write”; “I had bad handwriting style. I couldn’t write quickly; I wrote torturously slow with ‘huge’ spelling mistakes. Verbs were written with \( \langle \omicron \rangle \) (omicron) instead of \( \langle \omega \rangle \) (omega) and all \( \langle \omicron \rangle \) were turned into \( \langle \eta \rangle \) and vice versa”. Data suggested that spelling difficulties included mistakes in ambiguous letters due to grammatical inefficiency, letter inversions, mirror writing, letter and accent omissions. Nestor said: “I never put any accents above letters. Never!” and Hannah mentioned that letter inversions and mirror writing were “so common that it is not perceived as a problem anymore”.

As far as text composition is concerned, data analysis suggested difficulties in syntax of sentences, expressive writing and structuring ideas in a text. For instance Andrew mentioned that “the problem was mainly in syntax” and similarly Stelios said: “I wrote a sentence, it may have been wrong in terms of syntax but it had a nice meaning”. Others though reported having difficulties with expressive writing. For instance, Nestor stated: “I made lots of scribbles because I wanted to say something else and it did not come out correctly because of problems in written expression”.

Handwriting seemed to be a significant issue for all participants and took several forms such as speed difficulties. For example, Nestor said: “I wrote very slowly. I never remember myself having enough time to copy from the board in class. I always stayed in during breaks to write and in exams I was always the last to leave the classroom and still I wouldn’t have been finished”. Bad writing style, scribbles, and untidy writing were reported as other types of writing difficulty. Hannah said: “Up to now all my
letters were making angles. There was no circle, no curve; when I managed to write $\alpha$ and $\theta$, I admired them”.

Difficulties in letter size, delimitation and orientation of writing on the page, omission or confusion of punctuation marks were also reported. Hannah is possibly a very indicative example. She mentioned her handwriting was sparse and her letters were huge, “about half-page”. She also suggested difficulty in keeping letters in a line. “If a philologist wanted to read my essay, he had to turn the page around because my writing was a spiral… especially if I was given an A4 to write on. I was following the edges of the page and I didn’t split words because I don’t know how to break them up and so, I continued writing sideways. Moreover, I write without using accents, I have never used accents\footnote{In Greek accent is a punctuation mark written over a letter to show you how to pronounce it.} in my life. If I want to stress something, give emphasis to a word, I’d put an accent instead of an exclamation mark. I also don’t use punctuation marks, neither comas, nor full stops.” said Hannah.

Finally, participants mentioned some difficulties in grammar. “I have a serious problem with grammar… I don’t have a clue” said Andrew. Grammar difficulties are associated with difficulty in automaticity of the grammatical rules in spelling. For instance, Stelios said: “when you have dyslexia, you may know that all verbs are written with $\omega$ - the rule - but there is no chance I write verbs with $\alpha$, all are $\phi$”.

**Phonological discrimination**

Five out of the total number of six participants seemed to have faced difficulties in phonological awareness which were observable both in reading and writing. For instance, Dianna used to confuse the phonemes “/δ/ and /θ/” in reading, Stelios confused double phonemes “/ks/ and /ps/” in oral speech, while Eugene mentioned having difficulties with “/θ/ and /φ/ both in reading and writing”. Nestor claimed that he had difficulties with graphemes such as “$<\phi>$, $<\theta>$, $<\kappa\tau>$, $<\pi\tau>$ and other double clusters of graphemes” whilst Andrew suggested that he could not recall the correspondence between the phoneme “/e/ and the grapheme $<\alpha>$”.
Oral expression and vocabulary

According to data analysis, oral speech difficulties include limited vocabulary, slips of the tongue and weak fluency. For example Hannah said: “I am used to slips of the tongue; I don’t see it as a problem anymore. I also speak quickly and my dyslexia makes me have difficulties with speech flow”. “The problem is that when I want to say something and I cannot find the appropriate word, I say ‘similar’ words but they have ‘similar’ meanings”. Likewise, Andrew stated: “I have another problem… I cannot be very analytic in something. I answer synoptically”.

Concentration

Difficulties in concentration seem to be a common characteristic among participants. Four out of six reported being easily distracted both in class and while studying at home. For example, Nestor stated: “I could never stay concentrated in class; not even as an adult”; “not even in lessons I liked” “I was lost; my thoughts flew. I would turn around and 30’ minutes would pass until I looked at the teacher again”; “concentration was generally one of the most difficult characteristics and affected my ability to study at home too”. Difficulties in concentration seem to be associated with reading comprehension too. Andrew said: “I want very much to read books but I don’t, because by the time I reach the third line my mind has stopped; has gone. I compose many pictures… all of the time… and so, I cannot read”. For Hannah, concentration is still an issue: “It gets on my nerves! I cannot stay concentrated at all. I need someone to bring me around when I stack in the blank”. In this sense, lack of concentration seems to be a problem and an obstacle.

However, Hannah mentioned that “it also has its nice moments. Because you are in class and you are bored, and here comes ‘Miss Attention Deficit’, and you are out of space. It was nice once in secondary school… I was absorbed looking at the blackboard and there was a black castle; and somewhere at the background I heard my name and the teacher asking why I wasn’t writing”. Thus, it seems that attention deficit it is not perceived solely as a problem “simply because as a child it is nice to daydream”, as Nestor further suggested.
Foreign Languages

According to data, participants seemed to have faced difficulties in the acquisition of foreign languages. “I was never good in foreign languages” said Nestor. Likewise, Andrew stated: “I couldn’t learn English; I went to classes but I didn’t progress, no matter how many years I attended lessons”; “I learned English as long as I stayed in England”. Such a statement implies that foreign language acquisition is not impossible; the teaching techniques may be inefficient. Perhaps memorisation of vocabulary should be replaced or complemented with more experiential teaching methods.

Furthermore, the phonological transparency of a language may play a role. For instance, Eugene suggested that foreign languages were his worse subject but he was good at French. “I took private lessons both in English and French. In French I was better than all of my peers… but in English I was way behind. I studied English for seven years and I didn’t even get the lower degree”. Similarly, Andrew suggested that although initially his language difficulties “were more evident in English”, nowadays “English seems to me easier than Greek because it has an advantage in comparison to Greek; It doesn’t have so many <ω>, <η>, <ε>, <ο> etc.” As a result he prefers to write in English in public because as he suggested: “it feels safer”.

Memory

Data analysis suggested that for most participants remembering had been challenging both in short-term and long-term memory. They faced difficulties in memorising information such as dates and names and remembering sequences. Eugene said: “I never learned the alphabet; even now sometimes I might forget a letter”. Moreover, in some cases, memory issues seemed to be associated with the misconception of concepts. For instance Nestor said: “I’m not good at learning things by heart; I never was”; “If I learned something by rote I lost the meaning and I then couldn’t remember it”. Apart from affecting learning, memory difficulties seem to influence school performance too. Dianna claimed that although she put effort into studying, “there was no chance of remembering” and so, she could not prove she had studied. Therefore, it could be suggested that students with memory difficulties tend to be at risk of failure, especially since within the Greek Educational system evaluation of performance seems to be largely based on the ability to memorise.
Although generally participants reported memory as a challenging area, some claimed to have strong visual memory. “For instance if I close my eyes I can visualise this scene exactly as it is” said Dianna, while Andrew stated: “I remember the images and the titles on a page and then its content”. Generally, participants suggested they used this type of ‘photographic memory’ to remember texts that they had been asked to learn by heart at school.

**Visual perception**

Strengths in visual memory are perhaps associated with efficiency in visual perception. Four of the participants claimed to be “visual types of learners”. Hannah suggested she is very good at image processing: “Logical sequences of pictures are my favourite… In tests I never failed in any image task”; “If you represent something visually three times, there is no need to say what comes next; I’ve already got it”. Similarly, Nestor mentioned that he ‘sees’ the answers in mathematics, possibly implying a visual approach of learning. Moreover, Andrew mentioned that he is fascinated by images: “It is something I can easily keep in my memory and process it”; “Access to meaning is more direct”. Therefore visual means seem to facilitate memorising, processing and learning information and that they are perceived by participants as strengths.

However, there were cases when, even for visual learners, visual perception had been challenging. For instance, Dianna mentioned that sometimes, especially when she was tired, “letters were trembling”. “There was no chance of me reading. I had to ‘hold’ the words one by one to read”. Such a statement seems to suggest that visual skills may vary depending on the circumstances.

**Practical thinking and agility**

Most of the participants claimed that in comparison to theoretical subjects they were doing well in subjects that demand practical thought. For instance Dianna was “good at science” and Nestor was “always more than good in mathematics, science and chemistry which didn’t involve much theory”. Similarly, Andrew stated: “I find it easier to do practical than theoretical subjects” and this was clearly depicted in school grades. “If a specialist had a look at my grades he’d see that in the practical part my grades were
19, 20 whilst the rest were 8, 9, 10”. Andrew related his strength in practical thinking directly to dyslexia, as an unavoidable consequence of his difficulty in dealing with theory. However, in Eugene’s case practical thinking was presented as a personal virtue: “In the dyslexia institute they told me that I couldn’t have problems in everything; I must be good at something. They told me I might be good at maths because I was different to the rest of my peers. And so, I found myself being very good at maths”.

Nestor also perceived his way of thinking as being ‘different’ in terms of agility. “I have realised many times that when someone tells me something, it takes me less time than others to understand it”; “I have realised, especially in maths, that my thought process is quicker than others. I saw the result without thinking too much” said Nestor. Similarly, Hannah claimed that she was “agile” and that dyslexia made her think differently. “It makes you understand things easier” and “if they describe something to you in a simple way, you can easily understand its core meaning”. Thus, regardless of whether practical thinking and a supple mind are attributed to dyslexia or to personal virtue, they tend to be perceived as positive characteristics by the participants.

Some ‘other’ characteristics

Finally, some participants mentioned characteristics such as coordination and fine movement difficulties. As it was mentioned above, Hannah had difficulty in drawing circles and curves which inevitably manifested in handwriting. Stelios also had difficulties with his fine motor skills: “My problem with dyslexia was also observed in my ability to tie my laces. I had a serious problem. I couldn’t make fine movements”. Moreover, Nestor reported difficulties such as “confusing right and left” and Eugene generally “being confused in some situations” which seemed straightforward to others.

General findings on the nature of the ‘situation’

Based on the analysis about the nature of the participants’ personal situations, it can be suggested that the referred characteristics seem to coincide with the dyslexia characteristics as these have been described in the literature. However, contrary to the most common conceptualisation of dyslexia in terms of weaknesses, in the present study the participants’ personal situations also included strengths which in cases were directly attributed to dyslexia. For example, Nestor has severe reading difficulties but strong
mathematical thinking. “I never had problems in maths... I was more than good, always… I had realised that it takes me less time than somebody else to understand something…” Similarly Andrew had reading and writing difficulties but strong visual perception: “I like pictures”; “I associate this directly with dyslexia… reading a text usually takes ages and makes me tired. As a result I turn to image which is something I can easily keep in my memory and process”. Therefore, the ‘dyslexia situation’ is better thought of as a sum or a balance of assets and liabilities. Analysis also suggested that characteristics are not unidimensional (e.g. difficulties in short-term and long-term memory coexisted with strong visual memory in some participants) or exclusively ‘positive’ or ‘negative’ (e.g. lack of concentration was seen both as an obstacle and as having nice moments). Moreover, even traditional dyslexia weaknesses (e.g. reading difficulties) should not be perceived exclusively as negative characteristics because such characteristics may have urged the individual with dyslexia to discover inclinations which under different circumstances may have gone wasted (e.g. Andrew’s difficulty with theory urged him to exploit his talent in picture processing and illustration). Thus, traditionally ‘negative’ characteristics may have ‘positive’ implications for certain individuals and this is why they need to be considered too in the examination of the ‘dyslexia situation’.

Moreover, analysis proposed that the characteristics reported by the participants in relation to their dyslexia situations tend to interlink and interact. For instance, as it has been mentioned above, some participants related their difficulties in reading comprehension with lack of concentration. For example Nestor stated: “I might read a text and without any obvious reason, I’ll lose my concentration and consequently the meaning of the text. And then back to the start, again and again”. Hence, the reasons of an observed difficulty may not always be straight forward. The ‘nature’ of the dyslexia situation is not solely composed by a set of characteristics but the interrelations between the observed characteristics need to be equally taken under consideration.

Finally, there is an issue about the ‘evolution’ of the characteristics. Some participants mentioned progress in comparison to the past (e.g. Nestor, Dianna and Eugene). However, improvement was not necessarily holistic. For instance, Eugene claimed to have improved in oral speech but was still having issues in writing. “There is a small percentage that cannot be improved or can be improved with straggles” said Eugene. Moreover, data analysis suggested that evolution does not necessarily mean
improvement. Hannah claimed to get “constantly worse” as time goes by possibly because of the lack of drilling. “As time goes by and I keep off the dyslexia methods, my eye ‘dis-learns’” said Hannah. Eugene stated in relation to the writing difficulties that persist: “If you do not practise a lot and you don’t write constantly, your organism starts to forget it”; “In school I had problems with writing but it helped that I was practicing. Now I don’t write anymore”. Furthermore, it seems that improvement is not stable but it tends to fluctuate as time passes. For instance, Andrew stated: “I think that nowadays in terms of spelling and syntax in relation to dyslexia, I am in the same level that I was in school. I improved though when I did my masters”; “At that period I think I had reached a good level, but…”. Hence, according to data analysis the evolution of a characteristic is not a linear line of improvement but a reversible motion between improvement and deterioration.

Finally, improvement of the ‘dyslexia situation’ is not necessarily related to improvement in terms of characteristics. Rather improvement may occur as result of personal maturity as well as a change of personal circumstances. For instance Dianna claimed to be doing better in literacy tasks as a result of manipulation and control tactics gained through experience. “I haven’t improved, I’ve learnt ways of manipulation so as to be able to study” said Dianna. Similarly, Hannah stated: “it affects me less negatively in comparison to school years because I’m used to it, I’m used to working with it”.

Passing to a different life-stage with different expectations seems also to contribute to changes in the nature of the situation. For instance, Stelios mentioned that he improved “so and so” but his current life has restricted literacy demands. “While in the past they asked you to read, now they ask you to do blind writing. I’m good at blind writing, and so I don’t have a problem” said Stelios. Therefore as it seems the ‘nature’ of dyslexia in terms of characteristics is inadequate on its own to describe the dyslexia situation. The circumstances of the situation (e.g. timing of diagnosis) need to be considered as well.

2.4 S situational dimensions

As was mentioned, Scholssberg et al. (1995) suggested eight significant variables in individuals’ attempts to cope with a transition. Although in this study not all eight dimensions were observable in every single case, the following dimensions emerged as important coping factors.
**Trigger**

Data analysis suggested that in the case of dyslexia the trigger is usually an unanticipated event - the diagnosis of dyslexia - or an unanticipated non-event - the inability to acquire literacy - or both. For younger participants the trigger was usually a diagnosis which took place due to teachers’ or family’s suspicions. For example, Eugene claimed that it was his year four teacher who “found out about it immediately” and said: “you have to get tested”. Up until then, neither his parents nor he had suspected anything. “If you don’t know, you don’t understand the symptoms. We thought everything was ok”; “When you are eight or nine years old, if someone else won’t tell you, you can’t understand. You play. You don’t like studying, you prefer football” said Eugene. Diagnosis determined the subsequent coping process which usually involved specialised support (see Coping strategies, p.243-244).

In the case of older participants “diagnosis arrived very late, after finishing school and taking university exams”, as Nestor suggested. Therefore, it could not have played the role of the trigger. Instead, it was the “difference” in school results and learning that problematised the participants. “I knew I was different from others in relation to reading, spelling etc. In school results, I knew that something was wrong” said Nestor. Similarly, Andrew, who had been misdiagnosed in childhood, stated: “I grew up believing that I didn’t have dyslexia. However, I always realised that I process things differently from others. I always felt I was different… but I was saying that since it hadn’t been diagnosed, I’m ok. Though, I was trying to be at the same level with my peers, but I never was”. Therefore, it seems that for participants without diagnosis the trigger was the unanticipated difference in literacy and school results and perhaps unsurprisingly their coping process differed considerably, because no specialised support was involved.

**Timing**

Despite the definition or the label attributed to the ‘new situation’ (e.g. ‘dyslexia’, ‘difference’, ‘laziness’ or ‘unexpected difficulty’), the timing in terms of social norms seemed to be the same in all cases; the beginning of schooling. For instance for Stelios the ‘dyslexia situation’ started in the 2nd grade of primary school with an official diagnosis. Similarly, in Eugene’s case it was the 4th grade of primary school whilst in
Dianna’s case, although diagnosis of dyslexia arrived in the last year of gymnasium “teachers were saying so throughout gymnasium and since early primary school”. Even in cases where there was a lack of diagnosis the ‘new situation’ seemed to start with the entrance to school and the student’s inability to respond to the expected literacy levels and follow their peers in terms of achievement. Hannah claimed that no matter how hard she tried, she was always lacking in something whilst Andrew suggested that “you lose ground fighting with dyslexia, whilst others move on”. Thus, it can be suggested that the participants’ social time clock with respect to literacy had been ‘late’.

**Control**

The control variable refers to the degree of actual or perceived control that individuals’ with dyslexia feel they have over their situation. As mentioned in the self subchapter, data analysis suggested that the degree of control is not stable; rather it tends to gradually increase as time passes. Participants suggested that during childhood there were significant others responsible for their coping (e.g. family, teachers and specialists) due to the lack or their partial understanding of the situation. Gradually though, through a process of personal growth and negotiations with environmental agents, individuals passed from the phase of dependence to counterdependence, independence and finally reach the phase of interdependence (see Self, p.147-148; see Coping Strategies, p.241-243).

It is important to mention that the degree of control over the situation differs across individuals not only as a function of the power of the environment but as a personality characteristic. For instance Eugene said: “I belong to this type of people that I’d like to know what I have... even if I was young, I wanted first to know and then to act”.

**Role change**

The present study suggested that for young individuals who received an early diagnosis of dyslexia, a ‘new’ identity was either developed or imposed upon them by the surrounding environment. For example, Eugene took up the new role of the ‘dyslexic’ as soon as he got a diagnosis and started specialised treatment at the dyslexia institute. The new role was initially perceived as a ‘loss’ because “when you are eight or nine years old you think that you’ll miss your afternoon activities, you won’t go to football
etc. The worst part was that I missed three afternoons of play; this is how I saw it. Then, when I went to gymnasium and I started to understand more, I realised I had to do it. Initially I saw it as a ‘must’ because others told me so” said Eugene. Thus, it seems that gradually the initial ‘loss’ was perceived as a role ‘gain’. In fact Eugene claimed that he had “benefited from being dyslexic in certain situations” because if he had not got a diagnosis of dyslexia and the subsequent exam modifications he “wouldn’t have succeeded on to university”.

However, in other cases the dyslexic role involved reservations because of peers’ negative attitudes. Hannah said that being dyslexic in primary school meant “staying in class during breaks and being seen as stupid”; “generally I was seen as an alien in primary, gymnasium and lyceum”.

In the case of the participants who did not receive an immediate diagnosis of dyslexia, they grew up as non-dyslexic but they were attributed other roles such as ‘lazy’ or ‘uninterested’. “The child is bored” said the specialists who examined Andrew. Similarly, Nestor claimed that he was described as lazy both by his teachers and parents: “He doesn’t study much and daydreams a lot’ that was a standard comment till I was old, in lyceum”. For these participants the late official diagnosis quashed previous roles. “In the end it was proved that everything was a lie” said Nestor. However, he suggested that due to his age the recently attributed role did not have much effect on him. “If I was young it might have affected me. It might have affected my parents too, But now it’s too late”. Contrarily Andrew suggested changing his coping efforts after diagnosis: “I think this process (of double-checking) started when I found out I was dyslexic. Up until this point I didn’t pay attention”. Therefore, it is likely that certain roles may variably influence the coping process. However, the small sample size does not allow any definite suggestions about different roles and certain coping efforts.

**Duration**

Scholssberg et al. (1995) claimed that situations are treated differently depending on their duration. Dyslexia is perceived by the participants as a permanent situation: “We found out that we cannot cure it, you can just improve in some areas” said Eugene. Similarly, Andrew stated: “you cannot extinguish the problem”. Contrary to literature (ibid.) which suggests that it is more difficult to cope with the negative issues when a
condition is permanent, data analysis suggested that although participants knew that “it
is a problem that doesn’t go away, ever” as characteristically Stelios suggested, they
submitted that dyslexia becomes an issue of lesser impact as they grow up. “You can
get better, till a point” but “after four or five years it doesn’t bother you anymore; you
don’t even think about it or you think about it rarely” said Stelios. As analysis suggests
the gradual decrease of the dyslexia impact seems to be partly a result of different
literacy demands in different life-stages, personal maturity and certain choices (e.g.
dyslexic adults can avoid literacy, whilst students cannot). In fact, Dianna claimed that
dyslexia was an issue solely during school years and whilst Eugene suggested that he
had forgotten about it and that it was the present research that “reminded dyslexia” to
him. In this sense, dyslexia maybe seen as a ‘less-permanent’ situation and such a
perception can differentiate individuals’ coping strategies.

Previous experience
According to the 4 S model, previous experience of a certain situation is likely to
influence the way an individual will cope with the same or a similar transition in the
future. In the present study due to the ‘once-diagnosed, life-long lasting’ nature of the
situation but also the lack of public knowledge over the issue, solely one participant
happened to have previous experience. Stelios stated: “I didn’t find it weird, because it
was something I had heard before and so I wasn’t impressed. It was the same period that
Eugene got examined”. It seems that the family experience of dyslexia for the older
brother operated as a preparation for the younger brother, preventing reactions of
anxiety or surprise such as those reported by Eugene who had not heard about dyslexia
before. More specifically Eugene said: “When I found out about the problem, I was
scared. I said ‘what are they going to do to me now?’ You hear a word that you haven’t
heard before and you try to understand, but you can’t understand from the word” and
“you get worried. You don’t know the word, you don’t know what it is and you wonder
where you stand. What is happening? Am I dying? I even thought so at some point”. Thus, it can be suggested that providing information for dyslexia contributes to the
elimination of anxiety responses.
Concurrent stress

Scholssberg et al. (1995, p.144) suggested that concurrent “stresses elsewhere in a person’s life will influence their experience and their ability to cope”. In the present study Dianna mentioned that the loss of her father at the end of primary school made her go through depression and significantly influenced her ability to cope with dyslexia and school expectations. “I was very sad because I lost my father… I watched the others with their parents and I put everything together… and then everything looked awful... I perceived it weirdly” said Dianna. On the contrary, Eugene’s concurrent stress due to a serious health issue with his waist seemed to facilitate his attempts to cope with dyslexia. As was mentioned in the self subchapter, Eugene claimed that his health problem forced him to get mature and ‘stronger’ and contributed to coping with dyslexia. Therefore, data analysis suggested that significant concurrent stressors are likely to influence coping with dyslexia both positively and negatively. This issue is re-examined in coping strategies subchapter (see p.243-244)

Assessment and appraisal of the situation

According to Scholssberg et al. (1995, p.144) multiple factors related to the situation such as “source, controllability, magnitude, duration, familiarity, timing in relation to social norms, personal life stage, and other concurrent events” tend to determine whether a transition is assessed as positive or negative and influence individuals’ coping attempts.

However, data analysis of the present study suggested that the assessment is not an ‘either-or’ situation. Rather it can be simultaneously ‘negative’ and ‘positive’ with respect to different aspects of the issue or it can even be appreciated ‘neutrally’. More specifically, dyslexia was solely a negative situation for only two participants. Andrew suggested that “there are no positive aspects in relation to dyslexia” and that it had been a barrier in the fulfillment of certain goals in relation to his “professional and academic career”. Nestor did not see dyslexia as a barrier but he claimed that “it has been a problem; it wasn’t something desirable” and that perhaps a diagnosis is needed to appreciate the positive aspects of dyslexia. “The positive aspects are perhaps realised more consciously, by someone who knows he’s dyslexic. If you don’t know about it - as it happened with me - you mainly feel disadvantaged”. Thus, it can be perhaps
suggested that there are different degrees of ‘negativity’ and that even if two individuals assess their situations as negative they do not necessarily mean exactly the same thing.

Moreover, Nestor’s suggestion about the relation between diagnosis and appreciations of the positive dyslexia aspects seems to be further supported by data. The four participants who received an early diagnosis claimed that dyslexia is not exclusively negative. For instance Hannah suggested that “dyslexia refers to some learning difficulties but it also has some advantages which are not evident in reading” such as the immediate and in-depth understanding of even the most difficult notion because of its association to pictures. Eugene also suggested that although “dyslexia was a barrier in daily activities, it had never been a barrier to something significant”. On the contrary he perceived dyslexia as a gain in terms of exams modifications for passing to university. Such cases suggest that dyslexia is not exclusively negative or positive but that it can be ‘both’ with regards to different aspects. “I just had a problem in terms of learning not in terms of life” said Eugene.

Furthermore, Eugene’s case suggests that appraisal tends to differentiate across aging. As mentioned above, in childhood Eugene saw dyslexia as a loss because he missed afternoon play. However, as an adult not only did he appreciate the role of special instruction as essential but also he felt he benefited from dyslexia. Likewise, Dianna saw dyslexia as a problem at school and as a barrier in the accomplishment of her goal to become a teacher. However, as an adult she seemed to perceive her dyslexia ‘neutrally’. More specifically Dianna stated: “Dyslexia is neither a disadvantage nor an advantage”; “It doesn’t bother me because I simply don’t read in public anymore”. In fact, data analysis suggested that for the six participants dyslexia was generally a more persistent issue in childhood and gradually decreased in importance. Similarly, Stelios claimed that “individuals with dyslexia stop having problems… as soon as they stop caring”. Thus, it can be perhaps suggested that a relaxed behaviour or ‘neutral’ evaluation of dyslexia contributes to coping.

Finally, data analysis suggested that appraisals of dyslexia seem not to be restricted to factors strictly related to the situation, as suggested by Schlossberg et al. (1995). Rather, it seems that appraisal of a situation is also influenced by a dynamic matrix of factors related to self (e.g. maturity, personality, values and commitments) and environment (e.g. support, social norms and expectations). For instance Stelios claimed that dyslexia
is both a “psychological issue of self-confidence” and a social problem “created by class”. “Because even if I don’t see it as a problem but all others do, they’ll definitely affect me”. Moreover, explanations provided by the environment may influence the individual’s assessment of the situation. For instance, in Eugene’s case the dyslexia institute suggested that he couldn’t have problems in all areas; there had to be a strength in a field such as mathematics, and it so happened. More details about the role of the environment can be found in the support subchapter. Finally, it should be stressed that in the context of this study, appraisal tends to be a relevant and fluid factor and no claims about definite links between certain appraisals and coping styles can be made.

3. Implications

As it was mentioned at the beginning of the chapter, the examination of the ‘situation’ would be incomplete without considering the factor of ‘implications’, because although in literature dyslexia is commonly conceptualised solely as a set of characteristics, it is the implications which stem from the dysfunction between these characteristics and the environmental demands that seemed to be central in the participants’ personal dyslexia situation. The participants of this study were not necessarily concerned with the nature of characteristics (e.g. difficulties in phonological discrimination) but mainly with their manifestations and implications in their daily routines (e.g. difficulty to read and comprehend text at school). In other words, implications seem to indicate the areas that individuals are asked to cope with and as such they need to be examined as an integral part of the dyslexia situation.

Implications could be categorised at two levels: a) a practical level of daily activities and b) an emotional level of personal feelings.

Practical implications

Starting with the former, implications at a practical level refer to areas mainly related to literacy (e.g. school, university, general studying and learning) but also areas associated to those previously mentioned (e.g. family, social relations, personal goals and choices, free time).
More specifically, the most commonly mentioned area of implications was school. Andrew suggested that because of dyslexia “things at school were awful” and that “it was a very difficult period” in his life. School implications included difficulties in keeping up with educational expectations, difficulties in learning and exams, bad results, hiding in class, gap between performance in practical and theoretical subjects, etc. For instance, Nestor stated: “In class… I never remember myself having time to copy from the board. I always took others’ notebooks. I stayed in during breaks to write. In exams I was always the last to go and I wouldn’t have finished all I wanted to say”. Andrew said: “in practical subjects my marks were 19 and 20 whilst in theoretical was 9, 8, 10”. The difficulties at school level though should not be attributed exclusively to dyslexia; rather the lack of support programmes and teaching expertise should also be considered too (see Support, p.197-199). As Dianna stated: “Unfortunately most teachers don’t know and create problems for children”.

Difficulties with literacy seemed to exceed the school limits urging the participants to make certain life decisions. It is perhaps no coincidence that all participants chose practical and technical subjects for a career. For instance, Nestor chose to build an academic career in mathematics: “My subject is practical, it’s mathematics... I don’t mind studying mathematics. It is an area I’ve always been good at and I’ve always liked it”. Moreover, participants mentioned modifications or alterations of preferences and choices because of the dyslexia situation. For instance, Eugene preferred studying in a technical school of logistics instead of a university school of logistics because of the lower standards. However, it seems important to mention that making certain choices because of dyslexia does not necessarily imply ‘negative’ implications. In fact, in certain cases literacy difficulties negatively affected performance in theoretical subjects but they seemed to contribute to the discovery of other strengths (e.g. in arts) which lead to successful professional and academic careers.

Practical implications at a school level can be associated with implications in family relationships. For example, Nestor mentioned that there were implications “at home… because of school results. My parents were whinging. It was logical. I hid tests in Modern Greek and spelling because I didn’t want them to see my marks”. Nestor suggested that his school results also affected the family’s social status too. His family belonged to a small, competitive community of families whose members served at the military forces. “I received such pressure and beating because ‘the daughters of others
scored 19 and you scored 14 and we cannot go out”’ said Nestor. As it will be presented in the support subchapter, families have been very supportive in the process of coping with dyslexia but the lack of knowledge and high value attributed to literacy have operated as factors of pressure upon the dyslexic children.

As far as social relations with peers were concerned, male participants claimed to have a good social life. Eugene said: “I never had a problem with my friends and my peers”. However, Stelios admitted that it is hard to have dyslexia “especially in school which is a small community and dyslexia is extremely observable”. Similarly, as an adult Andrew expressed worries about humiliation in the case of a grammar or spelling mistake in public. Contrarily, both female participants mentioned bad social relations with their peers at school because of their dyslexia. Dianna claimed that when her peers found out about dyslexia “they became reluctant” towards her, made comments about results and even complained to teachers. Likewise, at school Hannah was described as “stupid”: “She doesn’t understand, she is slow, we can make fun of her”. According to Hannah such attitudes had great implications on her social life: “I didn’t have friends, solely two or three people to talk to but that was perfunctory”. As adults the female participants suggested having content social relationships. However, Dianna hides her dyslexia from her peers at the hairdressing school as she doesn’t want to go through the same situation again. Thus, implications at a social level seem to be reduced as participants pass to adulthood but reservations and problematisations are present.

In terms of leisure time activities, the majority of the participants mentioned no implications. For example, Andrew said: “It didn’t cause problems; apart from school which was the theoretical part; all my leisure activities didn’t involve studying. I was doing gymnastics”. However, analysis suggested that free time activities were restricted to non-literate activities. “I’ve read only two books in my whole life” said Eugene and similarly Nestor stated: “I’ve never read a whole book in my life. Lately I read the first which was called “Logicomics” and it was a comic”. Moreover, there seemed to be a significant restriction of leisure time. For example, Nestor attended private lessons during summer holidays: “I remember I was never carefree to go out and play. That was rare and solely in summertime. Play wasn’t in my daily programme”. Similarly, Hannah said: ‘my daily routine was studying and so, I didn’t have free time”.

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At this point it seems important to mention that implications tend to change as time passes. “The problem differentiates across life span” said Andrew. As it has been already mentioned, dyslexia is an issue of lesser importance in their adulthood in comparison to school years. Stelios suggested that “in adulthood the demands change and it doesn’t affect you much... It affects you in other areas” such as work and university. All participants who attended university reported practical implications such as failure to pass exams, need for extra time for studying, lack of time to keep complete notes from instruction and uncertainty over the accuracy of their notes, difficulty in “essays and communication with professors” and delay in graduation. The lack of knowledge on the professors’ behalf and the absence of a cohesive legislative framework seem to contribute to the difficulties mentioned above. More details on this topic though will be given in support subchapter (see p.197-200).

Some implications on a practical level were mentioned in relation to work. For instance, Andrew stated: “dyslexia affects my work because I lose the meaning of some things. I may receive an email which says ‘send this’ and I won’t read ‘send’ but only ‘this’ and so, I will never send it”. The problems seemed though to balloon because of the lack of consideration by his colleagues (see Support, p.183 and p.208). Other participants though who have chosen jobs with limited literacy expectations, who do not face important implications at work did. For example, Eugene stated: “In work the things that I do and I write are specific; no problem”.

Participants mentioned some practical implications with regard to daily activities in adulthood. Implications in relation to daily life included hesitation to read in public, postponing of text composition, preference to private tuition, avoidance of reading as a leisure activity or difficulty in written communication and transaction with state departments. For example, Andrew mentioned a case when he needed to compose a text for a bank. “It was five words - scribble, two words - scribble”; “I wondered if the employee would understand and what he would say” said Andrew. In such cases the absence of public knowledge about dyslexia needs perhaps to be considered too (see Support, p.208-209).

Finally, although it was already mentioned, it seems important to stress that implications are not uni-dimensionally ‘negative’. In fact the appraisal of dyslexia implications may change as time passes (e.g. Eugene initially saw specialised support as
a loss in terms of leisure time but as he grew up he realised it was a gain for his learning). Moreover, it should be highlighted that practical implications are not results of “dysfunctional” dyslexia characteristics but stem from the dysfunction between personal characteristics and environmental expectations. The fact that implications seem to be more evident during schooling (when literacy demands are high and unavoidable) and decrease in adulthood (when individuals can avoid highly literate contexts) suggest that up to a degree, implications are environmentally constructed.

**Emotional implications**

The second level of implications refers to emotions related to the dyslexia situation. Participants mentioned a variety of feelings such as irritation, insecurity, shame and tiredness as well as confidence, positive surprise and happiness.

To start with, feelings of annoyance were mentioned by Hannah: “attention deficit has made my life difficult!” Similarly Nestor stated: “nowadays daydreaming gets on my nerves”. Feelings of inferiority were also reported. Nestor mentioned that the lack of diagnosis “made you feel mainly inferior at school” and Eugene stated: “reading was the only thing I felt bad about”; “generally I never felt inferior. But you heard the previous pupil read fluently, whilst you couldn’t, and you felt awkward”. Eugene’s case suggests that emotional implications can be related to only one function of an individual’s situation rather than being holistic. Nestor’s words about feelings of frustration supported further this suggestion: “I felt very frustrated in school, in class mainly. At the break we used to go out and play and I didn’t have a problem because I didn’t read” said Nestor.

Feelings of pressure were also frequently mentioned. For example Nestor stated: “I received excessive pressure; too much pressure for a child. I never remember myself being completely carefree”. Even though Nestor perceived pressure as a negative emotional implication in his childhood, as an adult he assessed it positively claiming that “finally it didn’t end up badly”. Therefore, perhaps feelings cannot be instantly judged as ‘good’ or ‘bad’ because even traditionally ‘negative’ may eventually be seen as contributing ‘positively’ to one’s coping with dyslexia.
Moreover, although all participants mentioned having experienced feelings of anxiety, and disappointment, solely the female participants reported becoming introvert, feeling sad and having a low self-esteem because of dimensions related to their dyslexia situation. For example, Hannah said: “I was a child that didn’t talk much, an introvert personality; because in primary school they (peers) had me finger-pointed, I’d learnt to be silent, and so I continued being silent”. However, the small sample size does not allow any definite suggestions with regard to gender differences. Perhaps personality needs to be considered too.

Apart from ‘negative’ emotional implications, there seemed to be feelings such as self-confidence and positive surprise, relief and happiness. Hannah suggested she was positively surprised when the dyslexia specialist announced her IQ score: “He asked me ‘how much do you think it is?’ I started from 15, till I reached 95. But I had never imagined it... Such a relief!” Similarly, some participants claimed that their situations involved thinking agility which made them self-confident. In fact, Hannah stated: “When I was a child I understood notions that others couldn’t understand, and this fact enhanced my self-esteem and I liked it”. In the same way, Eugene suggested being happy when his peers asked for his help in mathematics and also, having an enhanced self-esteem and social status due to teachers’ lack of knowledge about dyslexia. “Teachers asked me what I had, what it was, how it felt?… and this helped me partly because I felt I knew while they didn’t. And my friends in class were surprised and wondered how he could know when our teacher didn’t know”. Therefore, contrary to common beliefs, the dyslexia situation involves positive feelings.

Moreover, data analysis did not suggest any absolute links between certain dimensions of the dyslexia situation and emotional implications. Rather, an emotional implication may be related to more than one dimension of the dyslexia situation. For example, feelings of irritation were reported in relation to a lack of concentration, inappropriate behavior by teachers, studying and university demands. Also a multiplicity of emotional implications occurred in response to a single dyslexia aspect. For instance, Dianna mentioned that she felt “irritated”, “disappointed”, “tired”, “bored” and “sad” with regard to school attainment. Moreover, one aspect of the dyslexia situation can have different emotional implications for different individuals. For example, peers’ comments urged Dianna to become introvert whilst Stelios claimed that peers’
comments left him completely indifferent. “When you reach a certain age, you say to yourself: I don’t care at all about what others may say”.

At this point it seems important to mention that emotional implications are neither stable nor holistic. Stelios, who as an adult is “cool” about dyslexia, reported that as a dyslexic pupil in a small class he experienced “feelings of stress and shame”. In fact, similarly to the gradual decrease of practical implications along with aging, data analysis suggested that for the majority of the participants, emotional implications tended to decline as they grew up. This of course does not mean that emotional implications became extinct or that there seemed to be no possibility of “outburst” of feelings in relation to dyslexia under certain circumstances.

Finally, at first sight, practical implications may be perceived as the basis of emotional implications. However, data analysis suggested that this is not a one-way cause and effect association, but rather a reciprocal relationship. For example, Eugene claimed that there were cases when failure in a lesson affected him psychologically and this made him fail in other subject too. “I felt bad when I marked 10 in Greek; and even though I was good in history and I should have marked 17, finally I got 13 because I felt awkward psychologically” said Eugene. Therefore, a practical implication may have emotional implications but these can bounce back at a practical level creating a reciprocal and dynamic relationship between the two levels of implications.

To sum up, it can be suggested that there are no absolute links between certain emotional and practical implications of dyslexia. Instead there seems to be fluidity of implications depending on individuality, life-stages and environmental circumstances. In fact, the ‘nature’ of the situation in terms of personal characteristics in conjunction with environmental demands and circumstances (e.g. the 4s dimensions) seem to create the new state of “dyslexia situation” which tends to have certain implications for individuals both at a practical and emotional level. This multiplicity of factors creates a dynamic and complex matrix of relationships which is the ‘situation’ that individuals are called to cope with and so, the present study suggests that a holistic examination seems to be more appropriate in the case of dyslexia than focusing solely on eight dimensions, as the 4 S model suggests.
C. SUPPORT

This subchapter explores the role of the environment with regards to coping with dyslexia and so it can be seen as responding to the 2\textsuperscript{nd} Research Question\textsuperscript{18}. Environmental support was reported by the participants as a factor of great importance. It derived from a variety of sources such as intimate relationships (e.g. family, friends and peers) or broader relationships (e.g. dyslexia specialists and psychologists), institutions (e.g. school, dyslexia institutions, frontistirio\textsuperscript{19}), circumstances (luck, events and coincidences), broad social contexts (e.g. society) and systems (e.g. educational system, diagnostic system) (see Appendix 11). Before proceeding to the analysis of each of the environmental factors mentioned above, it seems important to highlight that support from these sources comes in different types, shapes and sizes and attempts to serve different functions. Therefore the chapter will start with a reference to the different types of support and will continue with a critical commentary about the nature and the “behaviour” of support as a whole. The chapter will finish with a detailed analysis of the support provided by each source.

1. Types of support

To start with, data analysis suggested that support can be classified into four main categories and their subcategories based on the source’s intentions, perceptions and attitudes towards the issue as well as methods of intervention (see Table 1).

a. Situation-focused support

As the term suggests, support that falls under this category is concerned with efforts that intend to deal with the situation and its implications. The category is further divided into

\textsuperscript{18} Which environmental factors play an important role in the dyslexic individuals’ coping efforts and how?

\textsuperscript{19} Frontistirio (in Greek: φροντιστήριο) is a type of private cram school which is common especially among secondary school students due to the preparation for university entrance exams.
four subcategories: medical support, mainstream support, survival support and alternative support.

<table>
<thead>
<tr>
<th>TYPES OF SUPPORT</th>
<th>INTENTIONS AND GOALS</th>
<th>METHODS</th>
<th>SOURCES OF DELIVERY</th>
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<tbody>
<tr>
<td>a. SITUATION-FOCUSED SUPPORT</td>
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<tr>
<td>i) Medical support</td>
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<td></td>
<td>Dyslexia treatment so as to help the individual acquire literacy efficiently</td>
<td>Intervention at person-level based on specialised materials, techniques and (even) medication.</td>
<td>Dyslexia experts</td>
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<td>ii) Mainstream support</td>
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<td></td>
<td>Enhancement of learning and literacy</td>
<td>General teaching based on traditional and mainstream methods</td>
<td>Non-dyslexia-experts (e.g. family) and professionals in certain field (e.g. philologists)</td>
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<tr>
<td>iii) Alternative support</td>
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<td></td>
<td>Modification of traditional literacy methods and environmental standards to enhance individual’s learning</td>
<td>Use of alternative communication systems (e.g. visual and oral systems) that supplement or replace the official alphabetic writing system</td>
<td>Variety of sources (e.g. official educational system, general teachers, family, technology)</td>
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<td>iv) Survival support</td>
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<td></td>
<td>Efficient response to environmental demands without necessarily improving literacy-wise</td>
<td>Training individuals to hide/bypass dyslexia difficulties and trick environmental agents</td>
<td>Variety of sources (e.g. professionals in their field, friends, family, technology)</td>
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<td>b. PERSON-FOCUSED SUPPORT</td>
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<tr>
<td>i) Psychological support:</td>
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<td></td>
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<tr>
<td>(a) Official medical psychological support</td>
<td>Systematic treatment of the psychological implications of dyslexia</td>
<td>Specialised intervention at person-level based on specialised psychological methods and medication.</td>
<td>Psychologists, psychiatrists etc.</td>
</tr>
<tr>
<td>(b) Unofficial psychological support</td>
<td>Unsystematic emotional support</td>
<td>Relief, encouragement and soothing feelings stemming from intimate relationships</td>
<td>Non-expert kith and kin (e.g. family, friends)</td>
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<td>ii) Social support</td>
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<td></td>
<td>Creation and sustainment of a well-functioned social status</td>
<td>Building a network of relationships and friendships based on exiting intimate relationships</td>
<td>Friends, brothers and sisters</td>
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<tr>
<td>c. MORAL SUPPORT</td>
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<td></td>
<td>A stance of disinterest and neglect about dyslexia-situation based on the assumption that providing support is neither obligatory nor a feasible option; everyone has the moral duty to find his/her own solutions.</td>
<td>Indifference and disregard towards dyslexics' needs and coping efforts; actively negative behaviors</td>
<td>Variety of sources (e.g. society, teachers, educational system, schoolmates and colleagues)</td>
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<td>d. FINANCIAL SUPPORT</td>
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<td></td>
<td>Covering of the expenses related directly or indirectly to dyslexia and its implications</td>
<td>Payment of medical type dyslexia support (e.g. examination and fees for specialised treatment), mainstream support (e.g. by experts in certain fields), private higher education expenses, vocational support in family business</td>
<td>Mainly parents</td>
</tr>
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Table 1: Types of environmental support.

**i. Medical support**

According to data analysis, the sources of medical support had a clear medicalised understanding of dyslexia as a pathological condition that lies in the individual. Medical
attempts aimed to act at the ‘heart’ of the issue and ‘fix’ dyslexia by intervening at the level of the individual. Intervention took the form of systematic specialised treatment provided by dyslexia experts so as to enable the individual to meet the literacy standards set by the environment. Therefore, this type of support seems to work in line with the medical model disciplines of diagnosis and specialised treatment.

In the present study, official diagnostic support usually came from private specialised dyslexia institutes or state diagnostic centers after teachers’ or parents’ referral due to suspicions. In this way parents and teachers could be considered as providing unofficial diagnostic support. For instance, Hannah said: “My mother had learning difficulties herself… and so she had suspicions; she had already brought up two children and knew the level I should have reached by the 6th grade in reading, spelling, mathematics”. Official diagnosis for Hannah came later from a specialised dyslexia institute which examined her thoroughly using screening tests “in PC form and an IQ test”. Likewise, Dianna claims that she was tested “with many visual screening tests, mainly with numbers” but she was also asked to read some texts.

Medical support also included explanations about dyslexia. For instance Hannah said: “As I’ve been told at the centre, it is basically genetic…; both hemispheres work at the same percentage… and so, information goes simultaneously to both hemispheres provoking confusion”.

Finally, intervention seemed to be a major aspect of medical support. According to participants, it usually took place at dyslexia institutes as one-to-one sessions with experts and involved the utilisation of specialised dyslexia programmes, methods and equipment which aimed to act at the heart of dyslexia and make the individual an efficient reader and writer. For example Stelios claimed that he was advised to use special notebooks with extra lines and tracing paper for his handwriting. Dianna was advised to audio-record her reading as a method for improving her reading skills. Other types of intervention included phonological tasks, tasks with cards containing syllables, writing tasks, drawing, play but also systematic programmes (e.g. Karpathiou’s (1995) and Pavlidis’s (2006) methods) for spelling, reading and attention deficit. Finally, in Hannah’s case specialised intervention took the form of a “medical prescription for ADHD”.

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ii. Mainstream support

Mainstream support seemed to be concerned with general environmental efforts to enhance learning. Such efforts were commonly accompanied by fuzzy, partial or complete lack of knowledge about dyslexia. Even in cases where there was some understanding, there seemed to be lack of knowledge about dyslexia intervention methods resulting in the employment of solely mainstream teaching techniques. In other words this category includes all general, customary, traditional methods that were employed mainly by non-dyslexia-experts to help individuals learn. For instance, Nestor mentioned constant drilling as a teaching method for reading improvement. “I had a terrible philologist who realised that I couldn’t read and she obliged me to do the reading of ancient Greek texts; every single day!” Similarly Hannah claimed that her teacher made her write a lot and even forced her to stay in class during breaks. “I always stayed in class during breaks to learn to write words... I always lacked in something. I had a teacher who forced you to stay in class during the break and write each misspelt word ten times”. Thus traditional learning methods seem to be based on work overload, quantity instead of quality, and punishment.

Helping with school homework was a common form mainstream support. For instance Andrew said: “up until the 3rd grade of lyceum I used to study with my mum”. In other cases help with homework came from supplementary private tuition at home with mainstream teachers. “I always remember myself, since I was little, attending private lessons. Teachers helped me with one thing or another; attempting to make me learn grammatical rules for spelling” mentioned Nestor. All participants mentioned having received mainstream support from parents or private tuition teachers based on traditional teaching techniques.

iii. Alternative support

Analysis suggested alternative support to be a type of support which is interested in changing the environment in order to help the individual cope. Instead of seeing the dyslexia as a medical condition and the individual as responsible for the situation, dyslexia was perceived to be socially constructed. The movement of focus from the individual to the context suggests that alternative support shares social model understandings. More specifically, according to data analysis, this category seemed to include efforts to differentiate environmental demands and circumstances so as to
enhance learning. For instance, oral exams provided by the educational system as an entitlement to diagnosed dyslexic students and differentiated personalised teaching based on alternatives to the alphabetic writing system seem to be included in this category because they change the environmental demands to meet the individual’s needs. For example, visual methods such as concept maps and schemas were employed by Dianna’s teacher as supplementary material to the main textbook so as to help her study history. Eugene’s teacher in Spanish replaced writing with pictures and sketches taking advantage of Eugene’s strong visual skills. Technological equipment could also be considered as providing alternative support. For instance, Hannah mentioned regularly using an audio recorder during university lectures so as to ‘make notes’ and listen to the tapes afterwards to gain deeper understanding of the lecture.

Therefore, alternative support is interested in promoting learning but not necessarily based on the improvement of literacy skills. Alternative methods suggest that compliance with the alphabetic writing system is not a prerequisite for learning and so, learning can occur via other means.

\textit{iv. Survival support}

As the term implies survival support is neither interested in ‘fixing’ dyslexia so as to enhance literacy nor in promoting learning based on any differentiated approaches. Survival support acknowledges that there are literacy related difficulties (without necessarily having a clear understanding of their origin or nature) but it is more interested in supporting the individual with dyslexia ‘survive’ in his/her context. Its major aim is to help individuals with dyslexia respond efficiently to environmental demands by training them to hide or bypass their difficulties, circumvent demands or trick environmental agents. Non-surprisingly survival support took mainly the form of non-professional assistance. For instance, friends provided survival support by correcting spelling in essays or helping with text compositions while peers supported by helping with cheating in exams or copying notes in class. “The major support from peers was copying” said Hannah. Certain technological means such as automatic spellcheckers in PCs or mobile phone devices and internet search engines with automatic lists of alternative options could be seen as operating within the survival support too. What differentiates them from alternative support is the intention of the user, who in the case of survival support does not aim for learning enhancement. For
instance Hannah used automatic search engines not to learn spelling but to accomplish certain tasks. “On the internet… I write half word and then choose one of the suggested options. I’m not worried about spelling”. From the teachers’ perspective, survival support took the form of lowering expectations and showing preferential treatment regarding results and marking so as to help the student pass the year. Usually such behaviours were based on the assumption that dyslexic children cannot learn. For example, Dianna said that her teachers “believed dyslexia is an illness… They didn’t think I was equal with other kids… and I said ok, if they want to see me like this, I don’t mind; I’m benefiting”. Thus, survival support does not see literacy and dyslexia improvement as the major goal; rather it prioritises the supply of aids that will help the individual with dyslexia to bypass or trick the environmental expectations.

b. Financial support

Although the category of financial support is not directly related to dyslexia, it seems to be a prerequisite for almost all types of situation-focused support and some types of person-focused support (e.g. official psychological support). Therefore, it was decided to include it in this chapter. This category refers to the financial aids that environmental sources - most commonly family - provide so as to facilitate individuals’ coping attempts. Neither mainstream private home lessons nor specialised support at dyslexia institutes are free in Modern Greek society. For example, Eugene claimed that the dyslexia institute “was state, but you paid a symbolic amount of money for each session”. Likewise, Stelios mentioned spending loads of money on specialised support sessions: “I will never forget it. Five thousand drachmas for 30 minutes, in order to learn to tie my laces”. Thus, financial support seemed to be a necessary condition for other types of support and this is why it has been included in this chapter.

c. Person-focused support

Contrary to situation-focused support which is concerned with efforts to help the individual deal with dyslexia, learning and environmental demands, this broad category of support refers to efforts which are oriented towards the individual in terms of emotional and social wellbeing. Therefore, it can be divided into two sub categories: psychological support and social support.
i. **Psychological support**

According to data, environmental efforts which aimed to help the individuals acquire and preserve a healthy emotional status seemed to be further categorised as follows:

1. **Official/medical psychological support** refers to the systematic psychological treatment provided by experts in one-to-one sessions so as to help the individuals with dyslexia cope with the emotional aspects of their situation. As Stelios claimed “nowadays those who have dyslexia visit psychologists” for systematic support in relation to their situation.

2. **Unofficial emotional support** refers to the psychological support which is provided mainly by non-experts (e.g. family, friends or even teachers) through intimate relationships and it was expressed as security, stability, familiarity, encouragement, relief, companionship, etc. For example, Andrew claimed to have been lucky having his mum standing by him, whilst Hannah suggested that her family attempted to offer her relief by saying “ok, it isn’t something important”. Moreover, even pressure was perceived as a form of interest. “There was pressure… but even this shows that there is a family that cares for the child” said Eugene. Finally, some participants suggested that dyslexia specialists at institutes established a friendly, non-hostile and encouraging atmosphere. “They gave me the strength to keep on trying by telling me that I had nothing to worry about” said Eugene. Whether official or unofficial, psychological support seems to focus on enhancing individuals’ emotional wellbeing.

ii. **Social support**

Data analysis suggested that since individuals are not ‘islands’ but members of wider communities and systems, support can take the form of social support, meaning the environmental efforts to help individuals build and sustain a well-functioned social status. In the present study, social support came mainly from intimate relationships with friends, brothers and sisters. For instance, Hannah claimed to have no friends at school. Instead she hung out with her older brother’s friends, while Stelios reported: “We attended the same lyceum, I was in 1st grade and my brother was at 2nd grade, and we had the same friends”. In other cases, participants mentioned their friends defended them against negative peer attitudes. “I had some friends in school who stood by me... and in many cases they talked about me (to peers); they defended me” said Dora.
In opposition to the previous types of environmental support, moral support refers to a stance of disinterest and neglect towards the individuals who attempt to cope with their situations. The term has been borrowed from Brickman et al.’s (1982) models of helping and coping and according to Sugarman (2001, p.186) ‘conveys a stance in which helping others is neither an obligation (because everyone’s troubles are of their own making) nor a feasible option (because everyone must find their own solutions)’. Therefore, according to the moral model, dyslexic individuals are responsible for their situation and for finding a solution. It is assumed that dyslexics cannot acquire literacy because they do not try hard enough and they are ‘lazy’ or inadequate. ‘The attribution to lack of effort is made despite the fact that the person may be working very hard’ (Brickman et al., 1982, p.371). The only form of ‘support’ deemed appropriate is the reminder that ‘we are all responsible for our own fate and have a “moral duty” to help ourselves’ (Sugarman, 2001, p.186). In this sense, self is considered responsible for coping whilst the environmental sources ‘wash their hands of the problem’.

In the context of the present study though, the term moral support has been extended from the simple attribution of responsibility to self to mean generally a stance of ‘lack of morals’ and/or an ‘amoral attitude’ on the environment’s behalf, including attitudes such as indifference, neglect or actively negative behaviours. More specifically, data suggested that the moral model was commonly expressed as a lack of knowledge about dyslexia. For instance, Eugene stated: “I said to a philologist (at school) that I have dyslexia and he asked me: “what’s this?”… There were also teachers who claimed to know what I have, but eventually they didn’t have a clue what dyslexia is. There were also cases where they didn’t believe I have a problem with syntax, spelling… they believed I took the statement so as to get preferential treatment”. Lack of awareness about dyslexia was reported by all participants in variable contexts (e.g. school, work and relationships with peers/colleagues) and seemed to be related to a disregard about the dyslexics’ needs and coping efforts. For example Andrew said: “I enrolled in a Spanish class with a group. I think in the third lesson I quit, because I had so many questions that I delayed the group… There was so much complaining from the rest of

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20 It is important to clarify that although the term ‘moral support’ is defined in English as a form of psychological support towards an individual (e.g. encouragement or approval of certain thoughts or actions), in the context of the specific study it tends to have a ‘reversed’ meaning regarding the environmental stances due to having its roots in Brickman et al.’s (1982) model of helping and coping.
the classmates”. Similarly, although his colleagues at work have been informed about his dyslexia “they cannot get it! They cannot understand the problem… what could be hidden behind it”. Participants mentioned that the educational system was characterised by a lack of concern too, since its support was restricted to the entitlement to oral exams and there was a lack of specialised methods and equipment (see Support, p.197 and p.201). For example, Hannah mentioned about a history book: “The book was rubbish. There was too much text and repetitions of the same information. Hiatus. Chaos.” Moreover, moral support took the form of direct negative attitudes towards individuals with dyslexia (e.g. negative comments from peers such as ‘lazy’, ‘stupid’ and ‘weird’) and illegal acts (e.g. violation of the right to oral examination). For instance, Hannah claimed that university professors did not comply with regulations: “Teachers do what they want. I tell them (about dyslexia), I submit my statement and then if they’ll remember it… Once a professor examined me illegally on different questions from those used for the rest of the class. He didn’t even know the regulations. Moreover, he didn’t even give me time to think and I almost used sign language to express myself” said Hannah. For discussion of how such negative moral attitudes can act as ‘support’, see the following section.

2. Critical commentary on support

The inclusion of moral environmental responses in a chapter about ‘support’ may provoke questions, because the notion of support seems to be traditionally related to intentional activities with positive outcomes. However, the data analysis suggested that traditionally ‘disengaging’ activities stemming from moral environmental attitudes may unexpectedly support the individuals’ attempts to cope. For instance, as it was already mentioned before, Eugene claimed that teachers’ lack of knowledge about dyslexia helped him enhance his self-esteem and achieve an elevated social status among his peers. Similarly Nestor stated: “A history teacher in gymnasium told me off and stubborn as I am, in the final exams I stayed up all night to prove that I could do it… and he was shocked”.

Moreover, although traditionally ‘engaging’ support from environmental sources is usually perceived as beneficial, data analysis suggested that in certain cases such intentional support was ineffective or had “negative” effects. For instance, the
specialised dyslexia support provided by Hannah’s mother during primary school helped Hannah to cope with school expectations and improve literacy-wise but simultaneously it was a factor of psychological pressure. Hannah stated: “I quit studying because I couldn’t stand it”, “I was in primary school and I didn’t have a childhood because I was constantly studying; from the time I left school till late at night! I was going crazy!” Moreover, such systematic treatment made it difficult for Hannah to get an official dyslexia diagnosis and the subsequent modifications provided by the educational system. “We’ve been everywhere (diagnostic centres) in Athens. None could find it (dyslexia) because my mum had done crazy work on me”. At this point it must be noted that whether an environmental activity (moral or ‘engaging’) would be considered as benefiting or negatively affecting coping depends on the individual appraisal.

Moreover, the unpredictability of results suggests that support intentions should perhaps be separated from support outcomes. In fact, in the context of this study the term ‘support’ was not automatically perceived in terms of effective assistance but rather as the sum of systematic and intentional environmental efforts to contribute to coping with dyslexia - which may or may not have had positive effects - and non-programmed and unintentional environmental activities and stances, which though were perceived by individuals with dyslexia as benefiting their coping. Additionally, in this study, support also included all the moral type (intentional or unintentional) environmental activities and (conscious or subconscious) stances that may have ‘negatively’ influenced the individual’s attempts to cope with dyslexia.

It is important to mention that in the present study environmental factors do not seem to be sources of exclusively ‘positive’ or ‘negative’ support, but may commonly operate beneficially, disadvantageously or neutrally to an individual’s coping at the same time. For example, the systematic dyslexia support provided by Hannah’s mum had been beneficial to her learning but a stressor for her emotional wellbeing. Similarly, the persistence of Nestor’s philologist with regard to his reading out loud in class had been a threat for his emotional and social wellbeing, but at the same time it helped him overcome his reading difficulties. “Nowadays I can read a bit more fluently because of that horrible teacher” but back then “I was on pins and needles. It was the worst thing… because of the overmuch pressure and the embarrassment in class”.

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Additionally, it seems that there is a tendency of support sources to simultaneously serve a variety of functions. For example, the UK University that Aggelos attended, provided immediate medical diagnostic support, survival support for meeting university standards (e.g. proofreading of essays), unofficial psychological support in terms of “relief and security; because they were open to listening …” and alternative support (e.g. extension of the submission deadline for the dissertation).

Furthermore, although support was divided into different categories, that was mainly due to presentation issues. Different types of support tend to co-emerge and the distinction between them is not always clear-cut; neither is it the strict classification to a sole category. In fact, a single activity from a particular source may be included in different support categories depending on the method and intention of support. For example, family support with schoolwork can be categorised as mainstream support, referring to the general efforts and traditional techniques (such as those employed for all students) to achieve learning. For example, Nestor said: “Yes, my parents held my books but because I was afraid of them I didn’t ask them to correct my spelling mistakes. Instead, I constantly asked for such help from my sister”. Checking spelling seems to be survival support. Finally, help with schoolwork could take the form of modification of the learning circumstances lying within alternative support. For example Andrew said: “My mum used to read the text and say it to me. If I read it on my own there was no chance of remembering… all the details. At least when my mum was saying the lesson to me, I started to gradually understand”. Therefore, a single activity - homework assistance - from a single source - family - can be inducted into different types of support depending on the intentions and the ways of helping.

Moreover, data analysis suggested that support sources do not stand as distinct entities; rather, they interact in multiple ways and co-operate creating a ‘support system’ which is dynamic and flexible. For instance, in Eugene’s case (see Figure 12) his primary school teacher suspected he was dyslexic, informed his parents and suggested having him tested. “My mother told me that my teacher saw a problem and we had to have it checked out” said Eugene. His parents took him to a state dyslexia institute where experts diagnosed dyslexia, issued a statement and subsequently intervened with specialised dyslexia work. “They used tests… we did spelling… and memory tasks and we talked a lot”. Moreover, the institute provided explanations about the nature of dyslexia to both Eugene and his parents and made suggestions for learning. The
A statement was handed in to school by the parents; teachers were informed and from that moment on Eugene was officially entitled to an oral examination. “I was examined orally both in school and in the final national exams” said Eugene who also claimed that due to the statement teachers and examiners became less strict. Therefore, it can be suggested that environmental sources of support interacted dynamically (teacher ↔ parents ↔ dyslexia institute ↔ parents ↔ school agency ↔ school teachers and examiners) in a sequence of transactions with multiple links and co-operated actively to support Eugene’s coping with dyslexia. At this point it should be stressed that although in the following section of this analysis environmental sources of support are examined separately, it must be kept in mind that environmental sources act together as a network of factors influencing each other and the coping procedures and creating a complicated and dynamic support system.

Figure 12: The support system during Eugene’s childhood.

With regard to time, data analysis suggested that support sources are not stable and fixed entities, but rather they tend to change the nature and degree of support they provide over time. Data analysis suggested that some environmental sources increase the support they provide, other sources decrease it, some sources pause their support for a while, other sources disappear completely from the ‘support system’, whilst new support sources emerge. Whilst generally sources of environmental support tend to change across life-stages, some sources seem to be more stable (e.g. family). However,
the type(s) of support offered by ‘stable’ sources seemed to differentiate with the passage of time. Even support that comes under the same label (e.g. financial support) did not have the same shape or intensity across different periods (e.g. family’s financial support in childhood took the form of payment of specialised dyslexia lessons, in adolescence took the form of fees for private mainstream tuition whilst in adulthood took the form of job salary). Moreover, it can be suggested that sources which involved the dynamic factor of human nature inevitably entailed integral complexity. For instance, physical persons such as friends or peers were not stable across life stages and so, the types of support they offered changed too. Consequently, it seems that it would be a mistake to think of environmental sources of support as static. Rather, the system of support seems to change as an integral element. A detailed life-course case-oriented example is included in Appendix 12, so as to illuminate the evolving nature of the support system. For issues of brevity in the context of this chapter an overview of the analysis of Stelios’s case is represented in Table 2.

At this point it seems important to mention that support which stems from an always-evolving dynamic system of multiple sources of support is hard to be defined or categorised under certain labels. Data analysis supported Sugarman’s (2001) suggestion that models of support are idealised. In real-world settings support often contains a mixture of assumptions which belong to various models (Brinkman et al., 1982). As it was suggested at the beginning of this section, a single source can operate within multiple types of support even for a certain period of time. Therefore, it is naïve to talk about ‘pure’ models or sources across time. After all, data analysis suggested that interactions between different sources (e.g. family and dyslexia institute) are highly influential and transactional, provoking changes in the nature of support provided by each source. For example, after a dyslexia statement was issued by the institute, Stelios’s family moved from a pure mainstream support towards medical understandings (e.g. dyslexia is a condition that demands specialised treatment). However, mainstream support such as personal assistance with homework was not abandoned. Hence, support as an entity produced by multiple sources, entails multiplicity of assumptions about dyslexia and ‘appropriate’ intervention.

However, support should not be simplistically perceived as the sum of support types but rather the new emergent entity which was created by the transactions between the different types. For example, as seen in Table 2, during childhood
<table>
<thead>
<tr>
<th>Sources of support</th>
<th>Life-stages</th>
<th>Family</th>
<th>Dyslexia Institute</th>
<th>Private Tuition</th>
<th>School University</th>
<th>Educational system</th>
<th>Circumstances</th>
<th>Peers/ friends</th>
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<tbody>
<tr>
<td>Childhood (primary school period)</td>
<td>Unofficial psychological support; Unofficial medical diagnostic support; mainstream &amp; survival educational support; survival financial support</td>
<td>Official diagnostic &amp; medical specialized support; mainstream and survival educational support; unofficial psychologic al support</td>
<td>Moral stance</td>
<td>Moral stance</td>
<td>Moral stance</td>
<td>Social, psychological &amp; survival support</td>
<td>Peers: Moral stance</td>
<td>Friends: Emotional &amp; Survival educational support</td>
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<td>Early adolescence (gymnasium period)</td>
<td>Unofficial psychological &amp; survival financial support</td>
<td>Moral psychological social support; mainstream educational support</td>
<td>Moral stance; alternative support for exams</td>
<td>Moral stance; alternative support for exams</td>
<td>Social, psychological and survival support</td>
<td>Peers: Moral stance</td>
<td>Friends: Emotional &amp; Survival educational support</td>
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<td>Adolescence (lyceum period)</td>
<td>Psychological, social and financial support</td>
<td>Mainstream &amp; survival educational support</td>
<td>Moral educational support; emotional support</td>
<td>Moral stance; alternative support for exams</td>
<td>Unofficial emotional and survival support</td>
<td>Peers: Moral stance</td>
<td>Friends: Emotional &amp; Survival educational support</td>
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<tr>
<td>Adulthood</td>
<td>Psychological, vocational and financial support</td>
<td>Moral stance towards learning; alternative educational support; psychological</td>
<td>Moral stance; alternative support for exams</td>
<td>Moral stance; alternative support for exams</td>
<td>Survival &amp; alternative support; unofficial emotional support</td>
<td>Peers: Social support; moral psychological “support”</td>
<td>Friends: emotional support; survival educational support</td>
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Table 2: Types of environmental support provided to Stelios in life-course.

the family factor alone provided unofficial psychological support, unofficial medical diagnostic support, mainstream and survival educational support, survival financial support and (indirect) medical support. The ‘final’ mode of support is neither ‘either-or’, nor simplistically a sum of different types provided by different sources. Rather it is a mixture of mixed assumptions; a ‘hotchpotch’ of different types and in this sense it coincides with complexity theory understandings.

However, at the same time it would be a mistake to exclude the possibility of some sources operating solely within a specific type of support. For example, as it can be seen at Table 3, data analysis suggested that moral support was dominant in the cases of society, diagnostic and educational systems. It seems, though, important to mention that suggestions about ‘dominancy’ are mentioned as being the outcome of a member-check process with participants who examined the legitimacy of the findings. Still, as it was
mentioned, due to the fluidity and the interactive nature of the support system it is hard to talk about dominant or pure models of support.

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<th>Childhood (primary school period)</th>
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<th>Adolescence (lyceum period)</th>
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<td>Medical (1) Mainstream (4)</td>
<td>Mainstream (4)</td>
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<td>Financial (3) Alternative (2)</td>
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Table 3: Types of support provided by different environmental sources in different time periods according to the participants. Numbers represent the number of participants that mentioned the specific model.

Although support is rarely of a ‘pure’ type, the occurrence of singular types and participants’ commentary about them highlights the importance of a discussion about ‘effectiveness’. Which of these types is more ‘successful’ or ‘appropriate’ for supporting individuals’ attempts to cope with dyslexia? Data analysis did not come up with a single, definite and agreed upon answer from everyone. Different individuals tended to report different types of support as useful or appropriate for their cases. For example, some participants regarded medical dyslexia treatment from dyslexia institutes as being very beneficial to their understanding and improvement literacy-wise. More specifically Eugene said: “I believe dyslexia experts helped me a lot to understand a few things (about dyslexia)” whilst Dora stated: “Actually the institute was a huge advantage for me… very positive. They helped me a lot”. Contrarily, Hannah quit specialised support because she could not stand the psychological pressure. Other
participants reported having been massively benefited by survival and alternative support. For example, Eugene mentioned automatic text processors such as spellcheckers as being very useful whilst Stelios mentioned making regular use of an alternative writing system (greeklish) so as to avoid spelling mistakes. “I’m telling you, I write in greeklish and so I don’t need spellcheckers”. Mainstream support was also appreciated as being beneficial literacy-wise. Nestor claimed that it was because of the persistence of his philologist that nowadays he can read a bit more fluently. The same participant reported that despite the negative psychological implications, parental pressure helped him succeed academically. “If my parents hadn’t stressed me so much with studying… I wouldn’t have achieved anything”. Therefore, as it was already suggested, in certain cases even moral behaviours seemed to contribute in coping with dyslexia.

Consequently, there seem to be no magic support recipes. Rather, data analysis verified Sugarman’s (2001) suggestion that different individuals respond differently to certain activities and types of support. This perhaps implies a need to ‘attack’ the issue holistically, from multiple perspectives (according to complexity theory understandings), because ‘appropriate’ support for a certain individual may be hidden in the most ‘unbelievable’ activities. Although effectiveness tends to be relative due to individuality, it still needs to be acknowledged that the role of environmental sources is of great significance in coping with dyslexia. “To my view the environment plays an important role; the most important role” said Eugene.

Before endeavouring to analyse each source separately, it seems important to make a reference to the relationship between the proposed types of support and the official models of dyslexia. Data analysis suggested that there is no accurate correspondence. In fact, out of all the types of support, only medical, official psychological and alternative types of support can be connected with dyslexia models (medical and social model respectively). The rest of the support types do not seem to coincide with the assumptions of any of the dyslexia models possibly because dyslexia models are focus-specific - their aim is the elimination of dyslexia difficulties - and take for granted that there is an in-depth understanding about dyslexia and a specific intervention practice (regardless if it is person or environment oriented). Therefore, it is hardly surprising that the moral type of support is not included in the dyslexia literature. In traditional medical and social understandings, interventional practices cannot take the form of negative
environmental stances and disengaging activities, although due to the factor of unpredictability these are likely to have positive implications on individuals’ coping. Similarly, although mainstream types of support may have some understanding about the nature of dyslexia, its knowledge on intervention is restricted to conventional teaching methods and since it takes no specific action for dyslexia, it is not surprising that it has never been included in the dyslexia models. Likewise a ‘survival model’ of dyslexia has never been mentioned in literature, because survival support has no direct intention to eliminate dyslexia difficulties; rather it is interested in bypassing or hiding them. However, it seems important to mention that although such types of support do not aim to treat dyslexia, they involve activities that contribute to individuals’ coping and so, their role in relation to the dyslexia system of support should not be neglected.

As a final point, the evolving nature of the support system, the ‘hotchpotch’ of support types provided by various agents constituting a model of support which is more than the sum of its pieces and the highly complex and influential interrelationships between the involved agents suggest that the final model of support seems to have a transactional nature. It is not simplistically restricted to the collaboration between social and medical assumptions, as suggested by the interactionist model; rather it involves dynamic involvement of the so far neglected types of support and deep, influential transactions between the environmental agents that not only change the emergent entity of support, but also the nature of environmental agents in terms of their assumptions and the support they provide to individuals with dyslexia.

3. The support of environmental sources

Although it is acknowledged that sources of support tend to operate as an interactive system, the contribution of each environmental source to the support system will be presented separately for presentation purposes, starting with one of the most important sources:

Family

Data analysis suggested that family plays a role of great significance for all six participants. Support within the family framework comes from parents, sisters and
brothers as well as members of the extended family (e.g. aunts). As it was suggested in the critical commentary, family support tended to change in shape and intensity over time. For example, in Eugene’s case, family focused on medical support (diagnosis and specialised treatment) during childhood. During adolescence priority was given to mainstream survival educational support in terms of coping with school demands and national exams whilst during adulthood financial support seemed to be the major concern. The changes in the types of support are probably related to an individual’s aging and the different environmental expectations in different life-stages. Therefore, it seems appropriate to examine the evolution of family support across different life-stages:

**Childhood**

A major issue during childhood seemed to be the ‘discovery’ of information about the situation. Data analysis suggested that four out of the six families searched for medical diagnostic support from experts because they had partial or complete lack of knowledge about dyslexia. For example, Eugene reported: “We thought everything was ok… we didn’t believe there was a problem… My mother used to say that it is human”.

Besides finding explanations about the situation, in childhood families provided educational support in the forms of specialised dyslexia support, mainstream support for learning and survival support for coping with environmental demands. Most commonly educational support took the form of personal assistance with homework using mainstream or survival methods. For instance, Nestor said “I remember my father writing the verbs in ancient Greek for me”. Data analysis suggested that parental support was not always successful or appropriate. For example Dianna reported: “I was left-handed but at home they forced me to write with my right hand… because I couldn’t write beautiful letters”.

In one case parental support took the form of specialised dyslexia support. Hannah’s mother “did intensive work using Pavlidis’s and Karpathiou’s methods; She found Pavlidis’s method from another mum at school. About Karpathiou… she searched and searched… found it, bought it, brought it home and we started…” said Hannah. Most commonly though, families provided medical support indirectly by paying dyslexia institutes. They also employed mainstream teachers for private lessons so to help with
learning and school expectations. Undoubtedly specialised or mainstream tuition from experts was based on parental financial support.

Moreover, in some cases alternative support was employed in the form of alternative teaching methods (e.g. Andrew’s mother helped him grasp the meaning of the lesson and memorise using oral means instead of reading and sterile memorising) or negotiations with school teachers in order to modify their teaching methods. Hannah reported: “My mum had politely asked the teacher to stop leaving me in class (during breaks)… because I had a problem, but the teacher ignored her”.

Finally, cross-case analysis suggested that families were a major source of unofficial psychological support providing stability, emotional closeness, encouragement and relief. Andrew praises his family as being the most significant factor for his coping. “I believe that personality and psychological wellbeing are built within the family. Family is the basis, the foundation; my family has supported me superbly”. Three participants though stated family as a source of psychological pressure (e.g. nagging, doubt, emotional pressure and physical abuse) in relation to studying, but it seems important to mention that in many cases pressure was evaluated positively either because of its contribution to improving literacy-wise or because it was perceived as showing interest. However, one participant referred to family as a source of exclusively ‘negative’ psychological support during childhood. Dianna suggested being depressed because of the loss of her father, having a bad relationship with her mother and facing her aunts’ lack of understanding about her literacy difficulties. “Family members made me feel inferior, showing my cousin as the ideal example. ‘Christina studies!’ They couldn’t understand that I couldn’t read” said Dianna.

**Adolescence**

Adolescence corresponds to the gymnasium and lyceum years during which family support was (almost) the same, possibly because the educational stages tend to have similar structures and expectations. Thus, findings are co-presented with special reference to aberrances, where they occur. The types of support provided by families are equivalent to those of the previous life-stage. However, the intensity of support seems to be differentiated.
More specifically, most families continued to provide unofficial psychological support in terms of emotional closeness. For example, Hannah said: “...my brother helped me not to feel frustrated with myself and taught me how to accept myself, as it is... and told me that I can face my difficulties”. Similarly to childhood though, for some participants family was still a source of pressure regarding attainment.

In terms of educational support, during gymnasium one more family looked for official medical diagnostic support. Family issues postponed Dianna’s diagnosis. However, for most families the focus during this life-stage was on providing mainstream and survival educational support because of the forthcoming exams for entrance to Universities. Mainstream support took the form of private, one-to-one lessons with exams-specialists over exam subjects. Secondarily to this support, family members offered personal help with homework, survival support for school expectations and alternative support for learning. For example Hannah’s brother suggested a more active, experiential approach to learning than simply reading the school handbook. “My brother used to take me to libraries and taught me how to look for information and pictures”. Needless to say, families continued to provide financial support for private mainstream and specialised tuition.

Finally, social support emerged during this life-stage possibly because socialising seems to be an important life aspect during adolescence. Both Hannah and Stelios mentioned that their brothers provided support in terms of friendships and social life. However, in Hannah’s case family was also seen as a source of undesirable social implications because Hannah attended the school at which her mother taught mathematics and this influenced her relationships with peers. “In lyceum I was ‘the child of the teacher’ and they made comments behind my back”.

**Adulthood**

Data analysis suggested that during adulthood family support was reduced, possibly because individuals’ control over their lives increased. Unofficial psychological support continued to be provided in the background as a source of security and care. Whilst in the previous life-stage the major focus was on mainstream and survival educational support for exams, in adulthood this was not an issue. Only two families provided educational and financial support in terms of tuition fees payment for private Greek colleges or overseas Universities. Finally, financial/professional support emerged
during this period as a type of assistance for career building (e.g. Eugene and Stelios worked for the family business).

To sum up, family plays a very significant role in the individuals’ coping with dyslexia. Its support tends to evolve over time, changing shape and intensity. Unofficial psychological support seemed to be the most stable type of support, running at the background of all other support types during all life-stages. Evolution is perhaps more evident in educational support (e.g. childhood → medical support for dyslexia; adolescence → mainstream and survival support for final exams; adulthood → financial support for tuition fees at University or professional support). Finally, the model within which families perceive dyslexia and intervene seems to differentiate due to a variety of involved factors such as knowledge about dyslexia, diagnosis (e.g. when dyslexia was diagnosed, families operated within a medical model) and environmental expectations at certain life-stages.

State Education

a. School
School is considered to be among the most important sources of support for coping with dyslexia because it is preoccupied with learning and education. This suggestion seems to be verified by the participants’ extended references to school experiences.

To start with, school can be considered as a mechanism that brings dyslexia to light. Participants did not report any dyslexia related experiences during preschool period and this is the reason why this period is not included in the analysis. Analysis suggested that school had been the field within which dyslexia difficulties were demonstrated mostly, possibly because within the Modern Greek educational system literacy tends to be the bedrock of learning and a prerequisite for any further knowledge. Contrarily, non-literate contexts did not seem to be dyslexia related. For instance, Andrew mentioned: “Dyslexia was a problem in school. Apart from school, which was the theoretical part, I did not have any problems; all of my leisure activities were not affected. I was doing sports for which I did not have to study”. Hence, it can be suggested that environments such as school and University, which have high literacy expectations tend to bring dyslexia into existence.
Furthermore, according to data, dyslexia seemed to be an issue of lesser importance in primary school whilst in gymnasium and lyceum it tends to be more vivid, possibly because of the higher literacy expectations. For instance, Eugene said: “in primary school I didn’t take exams and I didn’t see a difference with my peers because I was with them in all activities”. Similarly, Dianna suggested that in primary school dyslexia did not constitute an issue due to ‘loose’ evaluation: “We had a teacher who did not assess students accurately using 10, 9, 8 or 7. He would always mark all of us with a 10. So, there was no evaluation”. However, in gymnasium and lyceum the dominance of a grade-centred system and the promotion of line by line memorisation of text as the only efficient method of coping with assessment increased dyslexic students’ struggle to learn or even prove they had studied. “In school it was hard to prove that I had spent time learning something that had slipped my mind and this is why I had low grades” said Dianna.

Additionally, school ‘support’ involved moral attitudes with psychological and social implications. For example, Andrew stated that his school years “was a very difficult period” in his life whilst Stelios proposed that dyslexia is an “undoubtedly psychological issue” which was by “99, 9 per cent constructed by class” because the public eye of a small school community “creates a feeling of shame”. Psychological and social implications were further supported by Dianna: “I was trying to read but I couldn’t and I felt bad... I felt somehow inferior to my classmates”. Likewise, Nestor mentioned: “I felt awkward in school, mainly in class. During the break we used to play and I didn’t have a problem”. Although for boys social implications were restricted to in-class activities, the female participants reported more serious and permanent social effects because of in-class activities. For instance Hannah suggested that she had always been perceived as “stupid, slow and ‘we-can-bully-her’” in school because of teachers’ behavior: “There was always a finger-pointing; I was ‘weird’, ‘alien’ because... I always lacked something. I had a teacher who made me stay in class during break... I was feeling inferior to my peers because of the teacher’s behaviour”. Dianna suggested that the establishment of a grade-centered system had social implications because it encouraged competition between students. “I realised that they (peers) were making comments about me, wondering how it is possible I got the same grade as them; generally, there were comments about teachers and grades” said Dianna. A lot more can be said about the social and psychological aspects of school with regard to dyslexia,
because school is a dynamic community with many participants (e.g. students with dyslexia, their peers, their teachers and the school community as a whole) and multiple interactive relationships among them. This is not neglected, but for issues of presentation this section focuses on teachers and schooling practices. The rest of the factors are explored separately.

Generally speaking, all participants reported some kind of unpleasant experience in school associated with their situation which is very possibly related to teachers’ lack of knowledge or interest in dyslexia. “Simply no teacher was interested in getting involved” said Nestor. Similarly, Dianna claimed that the majority of teachers were “more interested in their salary… and just a few in doing their lesson (properly)”. Perhaps it is indicative that in an account of their academic past Dianna and Nestor both said that solely “one or two” school teachers stood by their side. Most participants did not report receiving any attention from school teachers in relation to their difficulties, suggesting a moral mode of support.

Regarding the teacher’s lack of expertise, as it was already mentioned, Eugene suggested there were teachers who were completely unaware about dyslexia and others who had partial understanding or misconceptions believing that “it is some kind of illness that comes during childhood”. Finally, there were teachers that even doubted his literacy difficulties: “They believed I took the statement so as to get preferential treatment” said Eugene. Although, a lack of knowledge regarding dyslexia was reported by all participants it seems that the percentage of teachers who were completely unaware tended to decrease as time passed. For example, Stelios - one of the youngest participants - mentioned that he had met “good teachers who knew about dyslexia. However, they didn’t know how to help”.

Although data analysis suggested that the lack of systematic teaching methods and tools to support students with dyslexia seemed to be the norm across educational levels, participants mentioned a few cases of school teachers who had further knowledge on dyslexia. For instance, Dianna said: “I had a teacher who had attended seminars and held a Master in SpLD and suggested listening to music (for concentration)... and it helped”. Moreover another “teacher who taught history made concept maps for me on the board... and if we didn’t have time, we opened the book and while reading the text we made notes of keywords… and this made it easier for me” said Dianna. The same
participant suggested that there were cases of teachers who possibly did not know a lot about dyslexia but “understood the difficulties in concentration and they differentiated the tasks”.

However, the majority of teachers seemed to employ mainstream teaching methods: “Teaching methods at all school lessons and university lessons are traditional and having dyslexia is thought to be unreal” said Hannah. As mentioned before, Nestor claimed that although nowadays he can read more fluently because of his philologist’s drilling method, reading out loud in class “was the worst thing” he ever experienced in school. This example suggests that although traditional teaching seems to ultimately have positive outcomes literacy-wise, it is likely to act as a source of extremely negative emotional and social support, raising criticism for the effectiveness of the method. Mainstream teaching methods at school had been further challenged in the context of this study. For example, Eugene claimed attending mainstream private lessons because “they didn’t teach us efficiently”. Similarly, Dianna stated: “Very few teachers taught properly and so, I couldn’t learn”.

The importance of efficient teaching was acknowledged by all participants. Stelios claimed that teaching is more important than the subject itself and “plays a great role on what lesson somebody will decide to engage in”. Similarly, Dianna said that “you can only cope if there is an appropriate person and appropriate teaching”; “a specialist is needed, who has attended seminars… and knows five techniques which work”. Based on the participants’ reports about their school experiences, it can be suggested that there had been an increased call for further education of the teachers on dyslexia.

Apart from incidences of inefficient teaching, participants also reported having experienced negative attitudes by teachers (e.g. pathologising and stigmatising views, doubt and pressure) which can be possibly associated to the lack of awareness. For example, Dianna said: “Teachers were whinging and put extreme pressure on me because they couldn’t understand my handwriting and mark my essays”. However, there were some teachers that showed favourable treatment, but that was within a pathologising conceptualisation of dyslexia. “They were favouring me because they thought dyslexia is an illness and that I wasn’t equal to my peers” said Dianna. Analysis suggested that having low expectations was a common behaviour and related to expressions of surprise and doubt. Nestor mentioned a story about a philologist who had
reservations about his exam results. “I took exams without sleeping at all the previous night but she couldn’t believe my essay was excellent. She thought I had cheated... and similarly I scored 14 in ancient Greek and again, she didn’t believe it, because I always failed”. This example suggests that students with dyslexia are trapped in a vicious circle because when they did not fail they were accused of cheating.

Stigmatising behaviours by teachers were also reported as a form of moral support. For example, Nestor was characterised as “lazy”; “he doesn’t study much and he daydreams”. Similarly, Hannah was seen as slow and weird in school because of her teacher’s inappropriate handling of the situation. Moreover, there were unconstructive behaviours (e.g. lack of cooperation with parents). In Hannah’s case the teacher disregarded the mother’s request to exclude Hannah from spelling in class and stop keeping her in class during breaks. It can be suggested that such moral attitudes by school teachers tended to transform the classroom into a hostile environment and make learning an unpleasant activity for students with literacy difficulties. Finally, participants reported that teachers did not always comply with the regulations about oral exams. Hannah mentioned that in gymnasium she was assessed orally “solely at the final exams”. Furthermore, she suggested that in national exams examiners did not follow the dyslexia-friendly criteria defined by the law: “the panel, three chaps who did not have a clue about dyslexia or how dyslexic students should be assessed, demanded accurate line by line reference to the book” instead of “the meaning; concentrated but comprehensive”.

b. University
Belonging to the same educational system, non-surprisingly university operated in a similar mode of support in terms of dyslexia expertise, regulations and attitudes. As with school, holding a dyslexia statement did not guarantee oral examination. Hannah suggested that university professors did not comply with oral exam regulations, although she had submitted her statement: “dyslexia is ignored”, said Hannah, suggesting a moral model of support. The lack of infrastructure services for dyslexia was in cases accompanied by general operational irregularities of the university system. For example, Stelios claimed that the examination system at his university was unreliable and re-evaluation of exam results was almost a forbidden action because the process was massively bureaucratic.
However, data analysis suggested that generally moral support had been smoothed by the personal interest and support provided by some specific professors. For instance, Dianna reported that her personal relationship with a professor at the hairdressing school was a source of alternative support: “We spend time together and talk a lot; and she knows that I know; and I solve my queries in private, not in class”. Likewise, Stelios claimed that having good personal relationships with professors proved to be a source of support because they were supportive both in terms of marking and further studies. “They suggested being my supervisors for my placements and postgraduate studies” said Stelios. Similarly, Nestor claimed that his PhD is the result of his “relationship with a professor in Greece”. “Basically, I started hanging out with a professor and I liked what he was saying, I liked the research and my thesis and all the things we did. And so I came for a masters”. As it seems positively-disposed professors played a key role for career aspiration, educational learning and psychological enhancement. However, it is important to highlight that such support was not officially provided by the institutions; rather it stemmed from interpersonal relationships and as such it can be attributed to an unofficial person-centred approach which gives priority to individuals, not dyslexia.

Finally, it would perhaps be interesting to make a comparison between the Greek and UK educational systems in relation to dyslexia support, as reported by the two older participants. As was already mentioned (see Self, p.143) both Nestor and Andrew got a diagnosis of dyslexia as soon as they attended UK Universities. This possibly implies a difference in awareness about dyslexia as well as in attitude. Andrew said: “diagnosis was immediate… I felt relieved and secure because they were open to discuss it and see if I had a problem or not. And this happened by teachers who weren’t specialists... And I was wondering how I could have attended primary school, gymnasium, lyceum and Art College and no one realised this thing. Then suddenly they understood the situation! I was surprised”. From a Greek perspective, it is perhaps striking that non-specialists could provide emotional and diagnostic support. Following an alternative approach, UK Universities provided system modifications such as extensions for essay submissions, one-to-one sessions with a dyslexia specialist for English, extra time in exams and free laptops. According to participants, although such modifications helped coping with learning and university’s demands, they did not solve the problem. For example, Nestor said: “University gives fifteen extra minutes for every hour of examination. Ok, it is so
and so… It is not bad, but still…” Moreover, Andrew suggested irregularities in the dyslexia provision. In reality, he never received any specialised support for dyslexia although “I had been told that I was entitled to support by a specialist and to one laptop”. Thus, although being more organised in comparison to Greek universities, the intentions of the UK system to provide systematic support based on social model approaches faced irregularities in their actual enforcement.

**Diagnostic system and educational system**

Data analysis suggested that the diagnostic system was an important source of support because it operated as a prerequisite for any official assistance provided by the educational system (e.g. such as entitlement to oral examination and time extensions). According to analysis, official statements were issued by national Greek Hospitals and by state diagnostic centers and dyslexia institutes. However, there were criticisms for the public diagnostic system and the testing process, which was found non-systematic, partial and superficial. “Hospitals provide solely a 30 minute session with a psychologist and that’s all” while in “public diagnostic centers, they ask you to write, simply…” said Hannah.

Moreover, analysis suggested the lack of an official and systematic internal mechanism that informs and connects the educational and diagnostic systems. For example, if school teachers suspected dyslexia, they referred parents to external diagnostic institutes. Then parents hand in the statement to school acting as an intermediary between the systems. Eugene’s case (see Figure 12) is perhaps an indicative example. Moreover, the statement did not seem to pass internally from one educational stage to the other (e.g. from lyceum to university).

According to data, oral exams in unofficial class tests and official final exams seemed to be the only modification that dyslexic students were entitled to within the educational system. As it was mentioned in the previous section, submission of statements did not guarantee the entitlement to oral exams across all educational levels.

Furthermore, exam modifications prescribed by the educational system for dyslexic students were reported to be unfriendly. Students were forced to change school setting and take exams in segregated dyslexia examination centres away from their peers. For
example Dianna said: “I lived in the suburbs and I had to travel to the city centre very early in the morning... and the bus was full and I had to wait for the next… trials and tribulations”.

Additionally, analysis suggested that teachers’ lack of knowledge about dyslexia should not be exclusively attributed to teachers’ attitudes. “To my view it isn’t the teachers’ fault; the educational system that didn’t provide any training is responsible” said Eugene. Additionally, data suggested that the educational system did not support schools with a counselor and so, “it was really hard to find information about dyslexia” said Eugene.

There were also references to mainstream teaching materials which were described as non-dyslexia-friendly. As it was mentioned in the moral support section, Hannah suggested that books contained an overload of repeated information, whilst other participants claimed that texts were thick and font size was small. “School books used small font and so, I always put my finger below the lines” stated Dianna.

Finally, the evaluation standards of the educational system were seen as being responsible for competition among students. For example, Dianna’s peers made complaints to teachers “always in relation to grades”. Besides, the mark-centred system seemed to encourage memorising by heart as the most efficient method for meeting examination standards. “In school they demanded students learn history by heart, line by line” said Dianna. However, memorisation without comprehension seemed to be an unconstructive learning approach which deemed dyslexic students to failure because it was difficult to respond to these standards or even prove that they had studied.

Summarising, data analysis suggested huge gaps in the assistance provided by the Greek diagnostic and educational systems to both students with dyslexia and teachers. The limitation of provisions to oral exams suggested a moral approach of support despite perhaps the initial intention of the regulations to promote alternative support within social model understandings by modifying the environmental demands.
Dyslexia institutes

Data analysis suggested that dyslexia institutes tended to be important sources of support within the Greek context, possibly because of the limited support provided by the state educational system. According to data in the past and in opposition to the present, only a few dyslexia institutes operated in Athens. Stelios mentioned that “back then there was an institute here and another about an hour away” possibly because “in the past they didn’t give money for such situations, because they didn’t know about it” as Eugene claimed.

Five participants mentioned that they had visited dyslexia diagnostic institutes while attending primary school or gymnasium. Dyslexia institutes were mostly private. There were some state institutes too though, which required some financial contribution. Institutes were staffed by experts and provided medical diagnostic support in terms of specialised examination and issuance of statements. However, data suggested diagnostic pitfalls. For example Andrew was diagnosed as “bored” instead of dyslexic, whilst Hannah claimed that her “mum had been fighting to get a statement” but “because of the (dyslexia) work she was doing, diagnostic institutes could not identify dyslexia and issue a statement easily”. Hannah finally got an Attention Deficit and Hyperactivity Disorder (ADHD) diagnosis from a well-known private dyslexia institute. “Although I have dyslexia, attention deficit was more persistent” said Hannah. The institute identified Hannah as dyslexic, but issued a statement for ADHD solely, as if dyslexia had been ‘cured’. Unfortunately the dyslexia difficulties re-demonstrated as soon as Hannah stopped the systematic treatment and eventually Hannah was re-diagnosed with dyslexia in adulthood. This generates questions not only about the efficiency of recovery techniques but also about the diagnostic criteria of the institutes. Despite these diagnostic ‘slips’, dyslexia institutes seemed to have significant medical contribution.

Especially in terms of intervention, institutes provided educational support for dyslexia using specialised techniques and materials such as “notebooks with discontinuous lines and edges” for handwriting, syllable cards “such as [τ] and [α] sounds [τα]”, “audio recording” methods for reading, chatting for oral expression improvement etc. Participants mentioned the use of individual learning plans and one-to-one sessions. “I had someone above my head to explain my enquiries and help me study; this was
impossible in class” said Dianna. “In the institute they also show parents how to help their child” said Stelios.

Moreover, dyslexia institutes offered survival assistance to students in the form of methods, tips and suggestions so as to cope with school expectations. “My teacher at the institute showed me a way; after finishing writing I used to read my text two or three times” so as to be confident in oral exams, said Eugene. Similarly, Hannah was advised to “sit alone at the front desk” in order to stay concentrated. Besides, Eugene mentioned that during primary school he had been advised by his teacher at the dyslexia institute “not to take any English lessons… because I might get confused”.

Finally, intervention in dyslexia institutes took the form of official and unofficial psychological support. According to data analysis, psychological support for dyslexia included non-pathologising explanations about the nature of dyslexia. For example Eugene stated: “He (the dyslexia expert) simply said that I don’t have a problem and that I have other strengths. He said that it can’t be cured but we could try to help you improve… he explained that it is not a problem and that it is a personal situation”. Psychological support also took the form of encouragement. Eugene mentioned that “the dyslexia experts gave me the strength by saying ‘you don’t have a problem, keep going’”. Moreover, the institutes seemed to encourage parents too. For example, Hannah’s mother was given congratulations for the systematic dyslexia work and she was encouraged that there would be further progress. Data analysis suggested that psychological support stemmed from the establishment of a welcoming environment and the development of friendly relationships between teachers and students. “We had a very good teacher with whom we used to chat a lot about irrelevant issues such as football. Because I like football a lot. I believe it is crucial teachers chat and ‘match’ with the student’s interests... When I made a mistake he would yell, but I knew he was pleased from the process and so you didn’t mind” said Eugene. Finally, in one case an institute provided systematic support with a psychologist because of the loss of a parent, which though had further implications on learning and dyslexia. “I attended psychological sessions because dyslexia coincided with the loss of my dad and I’d been through a lot because of this. I was going there and used to talk and they’d showed me ways to study and ways to see things differently because I wasn’t ok” said Dianna.
Data analysis suggested that all participants who received systematic intervention by the dyslexia centres evaluated the support as a very significant factor for their coping. “It was very important for me to get assistance from the institute. Actually it was a huge advantage… in school they used to make negative comments at every opportunity, whilst in the dyslexia institute they knew the causes, they knew how I performed, how such individuals perform… they helped me a lot” said Dianna. Eugene on the other hand initially disliked the institution’s support because he missed his afternoon play but gradually changed his mind: “when I went to gymnasium I started to understand more and I realised I should do it. Before I used to see it as a ‘must’ because others told me to do so”; “Dyslexia experts helped me to understand what I needed to do so as to cope and also what I have”.

Since dyslexia institutes were staffed by experts that tested, diagnosed and treated individuals with dyslexia, it can be suggested that they operate within a medical model of support. However, the initial medical approach seemed to be followed by a more humanistic approach which stemmed from the development of intimate personal relationships. Therefore, the movement of focus from dyslexia to the individual implies a cooperation of models.

**Private tuition**

Private tuition was suggested to be an important support source because all the participants in certain periods in their lives received private tuition such as private lessons at home or group lessons at “frodistirio”. Such lessons mainly aimed to provide mainstream educational and survival support with school subjects and exams. Nestor, who did not receive diagnosis of dyslexia until higher education, stated: “I always remember myself, since I was little, attending private lessons. Teachers helped me in one way or another”.

The most common function of private lessons though was the preparation for the national exams for entrance to university. This type of support did not aim to treat dyslexia; rather to teach dyslexic students how to respond to exam requirements. Surviving with the exam expectations, demanded becoming competent in a few subjects such as “‘Greek’, ‘Mathematics’ and ‘Principles of Economic Theory’” as Stelios said. Teachers that provided such types of support were experts in their field; philologists and
mathematicians who usually worked in one-to-one sessions using individual learning plans to meet the needs of the student. For instance, Hannah said: “My philologist taught me the methodology; how to structure an essay. It was the only private lesson I had in the 3rd grade of lyceum. She analysed and made copies of 10-12 themes for Greek and we used to discuss definitions, pros and cons… using bullet lists. And she’d read everything to me, we would discuss it, work together on the structure and then she’d write the essay”. Similarly Nestor referred to an “amazing teacher in the 3rd grade of lyceum, for exam preparation” who showed him techniques to write good essays. “Whilst others used to learn the subjects by heart, he taught me how to get into their meaning” said Nestor.

Private tuition for foreign languages was preferred by many participants because of the social and learning benefits. As mentioned before, Andrew started having private lessons in Spanish because his classmates made complaints. Besides, his teacher offered an alternative individualistic teaching mode when he was informed about dyslexia. “Quite often words weren’t written but were becoming a sketch”.

Concluding, private tuition in the form of mainstream, survival but also alternative support was evaluated by the participants as a significant source of support. “If I didn’t have lessons with that philologist I wouldn’t have succeeded” said Hannah. However, it must be mentioned that private tuition is available solely to individuals that can afford the cost.

**Peers and friends**

Peers and friends were also mentioned as a source of support with a variety of functions (e.g. social support, survival support, psychological support) across life stages.

Starting with childhood, most participants reported having no significant problems with their peers, possibly because of the primacy of play during this period as well as the low literacy school demands that did not highlight dyslexia difficulties. For instance, Dianna stated: “Dyslexia became an issue at gymnasium. In primary school tasks were the same for everyone… There was no (strict) evaluation”. However, it is important to mention that since childhood middle ability peers seemed to be the bedrock of learning in class shedding light to ‘deviant’ behaviours. This perhaps explains that even without a
statement, participants reported having realised that they were different. “I knew I’m different from the rest in terms of reading and spelling... attainment; I knew that something was wrong” said Nestor. Similarly Andrew stated: “I always realised that I approach things differently from the rest; I always felt I was different”. Comparisons with peers seemed to have emotional implications. “Simply when you heard the previous student read fluently whilst you can’t, you feel awkward” said Eugene who also mentioned that his peers became skeptical and reserved after being informed about his dyslexia. Moreover, classmates operated as a small society that displays excessive pressure and criticises its members in terms of performance, “creating dyslexia”, as Stelios claimed. Finally, some incidences of bullying by schoolmates were reported. Nestor stated: “as a young child perhaps I’d been bullied by some kids” and similarly Hannah said “there was always a finger-pointing; I was ‘weird’, ‘alien’.

Similar peer behaviours were reported by female participants during adolescence. Dianna mentioned that although before diagnosis her relationship with her peers was good, after the submission of her statement and oral examination, her classmates changed their attitude towards her: “Before the announcement, everything was fine” but then “they became more reserved and I’ve herd criticisms about me... Saying, it isn’t possible I gained the same marks as they did... Most of my classmates were complaining when we copied schemas from the board” said Dianna. Negative attitudes in the form of verbal bullying were reported by Hannah. Classmates called her “stupid”, “weird”, “slow” affecting her social and emotional wellbeing. Although, peers served as a factor of moral support, Dianna’s friends used to defend her against unconstructive criticism: “They stood by me… and defended me”.

Contrarily to girls, boys generally mentioned having good relationships with their peers during adolescence although there were occasionally some negative comments. “In a class of 30 students, there was a minority that would make a stupid comment about dyslexia... but when they got to know me better they realised that this isn’t important” said Eugene. Friends were reported as providing mainstream and survival support for lessons and exams. For example Eugene said: ‘I had a good friend who was good at theoretical subjects and I was good at practical subjects... and in exams we helped each other and we both passed”.
In adulthood the role of peers and friends in relation to dyslexia seemed to be reduced. However, friends were still reported as a source of survival support. For example Nestor said: “Quite often I asked for assistance from friends in order to write something. I write all my emails with my mate… I show him what I’ve written; he writes half of it, I write the rest”. Friends also provided emotional support, sometimes using ‘disengaging’ means. For example, Andrew said: “with my friends even if I write something wrong… they’ll laugh at me, but it’s ok”.

Contrarily to friends, peers were mentioned mainly as sources of moral support. For instance, Dianna mentioned that her classmates in the hairdressing school made comments about unfair and preferential treatment towards students who were examined orally. “They said ‘this kid has something’ but they didn’t know what it is or… why he is examined orally. And they said there must be a linkage with the head of the department” said Dianna. Such comments ‘obliged’ Dianna to hide her dyslexia to avoid social criticism, risking though her attainment. “How would you feel if the class starts pulling your leg…?” said Dianna. Similarly, as it was already mentioned, Andrew was forced to leave the Spanish class due to peers’ complaints. Moreover, at work “nobody understands the problem, till today… (although) they know I have a problem… they cannot by any chance understand what may be hidden behind all this” said Andrew.

To sum up, as data analysis suggested, whist friends tended to bypass dyslexia and give priority to unofficial emotional support and survival assistance with literacy, peers usually operated as a source of moral support. Moreover, during adolescence there seems to be gender differences with regard to the impact of peer’s behaviours. However, due to sample limitations the factor of individuality should be considered.

**Society**

Data analysis suggested that society was perceived as a source of exclusively negative implications for coping with dyslexia. “Social context was the least supportive source” stated Dianna. Central in almost all interviews seemed to be a reference to either complete lack of awareness or partial knowledge about dyslexia by the general public. “In Greece the majority doesn’t know what dyslexia is” said Hannah and similarly Dianna reported: “Those who know are so few in comparison to those that don’t know”.

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This lack of information lead to misconceptions with people often believing dyslexia is a weakness, a sign of inferiority or an illness. “Even nowadays in Greece they don’t know what dyslexia is… they believe it is an illness” said Eugene. Lack of consideration for dyslexic individuals and their excess difficulties was also reported. For example Andrew said: “I feel bad when other people cannot understand… I believe it’s an issue of open-mindedness; if others are not open-minded, it bothers me”. Participants also mentioned a lack of interest in the issues that dyslexic individuals may face. “Half of the Greek population may have dyslexia but they don’t care, they don’t know what it is” said Hannah.

Greek society was also reported as a source of unconstructive comments and derision. “I have heard many times the phrase ‘you are illiterate’” stated Andrew. Similarly Dianna stated: “I became an introvert basically due to the racism towards dyslexia. If people knew I wouldn’t have changed my behaviour… But there isn’t information and others see it differently”.

Stelios took it a step further viewing society as responsible for the problematic aspects of dyslexia: “Societal environment makes you change. If everyone stops seeing dyslexia as a problem, then I won’t see it as a problem. If I don’t see the problem, but everyone else does, then they will definitely affect me”.

Finally, it should be mentioned that participants stressed the growing need for public awareness, hoping that in this way society will stop operating as a source of moral behaviours. Dianna stated that “things would have been completely different both in school and society if information about dyslexia was provided”. Similarly, Hannah said: “Ultimately people have to accept dyslexia in Greece and get informed”.

**Circumstances and coincidences**

Circumstances emerged as an important source of support because different life-stages and eras tend to be accompanied by different circumstances. For example, in opposition to school years, most of the participants reported that adulthood had limited literacy demands downplaying dyslexia implications. Stelios claimed that in adulthood he “moved to another level. Whilst in the past they demanded reading, nowadays they ask for blind-typing”; “reading and learning by heart were replaced by simply
comprehending”. Similarly, Andrew reported that his work involves solely “face to face interaction with the clients”, whilst Eugene said: “I don’t write anymore. I write once every semester at University; mostly exercises with numbers, not text”. Limited literacy involvement though was also perceived as a drawback because it did not encourage improvement in terms of reading and writing. For example, Andrew stated: “I used to read a lot in Greek and I’d reached a good level but then I quit” and “since then the situation has deteriorated”. A similar statement about a correlation between drilling and literacy improvement was made by Hannah who said: “as more time passes since I quit the dyslexia methods, I ‘dis-learn’”. The issue here is that different life-stages tend to come with different demands and conditions and therefore they influence variably the individuals’ coping.

Participants referred the time period and the technological developments as a significant source of support. Stelios suggested that dyslexia does not affect his daily life anymore “because we have now entered a technological world”. A variety of technological means such as word processors and spellcheckers were mentioned. “If I have to send an official email, I’ll write it in Word and check the spelling” said Andrew. Likewise, Eugene uses his mobile phone spellchecker: “T9 has helped me to spell correctly… It automatically corrects spelling and I see the mistakes and learn the spelling”. Similarly, Nestor used audiovisual telecommunication means such as “skype” to communicate with friends and Hannah used a particular type of technological equipment called “Texas Instruments” to make notes of mathematical patterns. “Greeklish” was also commonly employed as an alternative writing system. Greeklish is a blend of Greek and English words; it is a simplified version of the Greek language written with Latin characters, used mainly in electronic media (e.g. internet forums, chattrooms, e-mails, sms). This new non-standardised written version of the Greek language tends to be orthography-free and quite popular among the participants. Stelios claimed making no use of spellcheckers; “I write in Greeklish and I don’t need it”. Andrew also uses Greeklish, especially in unofficial emails to facilitate his daily communication, but he thinks that it “had been terrible” for his dyslexia. “If there wasn’t Greeklish I would have been obliged to write in Greek. So, a large number of my spelling mistakes would have been corrected”.

Participants also mentioned modernity as a source of negative support due to the _predominance of written language_ as the official mean of communication. “Written
language has been dominant for centuries as the major means of communication; not visual communication. However it could have been the opposite. Apparently though most people communicate using written language; similarly to the fact that most people are right-handed and less left-handed. But this does not mean anything. As time goes by this is gradually subverted. As it happened with left-handed people who forty-fifty years ago were beaten to learn to write using the right hand. Ok, I cannot know if, say, after some years visual communication will be at the same level as written language, but... it is possible” said Andrew. Although printed alphabetic communication is considered the major means of communication over the centuries, visual communication (pictures, illustrations, signs, videos, web design etc.) has been lately increasingly used and could be promoted as an alternative learning approach because “it facilitates immediate access to meaning” and it helps “keep information in memory and process it”, as Andrew claimed.

Moreover, the language structure and phonological transparency of the writing systems was mentioned as a factor of negative support. More specifically, Eugene mentioned that he prefers Italian because “what you hear you write” whilst Andrew prefers English because he thinks “there is a crucial advantage in comparison to Greek; there are not so many «ω», «η», «ε», etc.” Moreover he claimed that “irregularities in English verbs are given” whilst the Greek orthography is more unpredictable. Although there seems to be a misconception about the degree of transparency of the writing systems, it is interesting that the irregularities of the Greek writing system due to historic orthography, tend to be perceived by dyslexics as a source of negative support in their efforts to spell correctly.

The coincidence of being brought up in a certain era was also mentioned as a source of moral support due to the paucity of available resources. Andrew suggested that in the 1980s “things were completely different… back then the average Greek was not aware about dyslexia”. Similarly, Stelios mentioned that “in the 1990s dyslexia institutes were rare” very possibly because of the lack of awareness, as Eugene suggested. In the 2000s though things improved in the private sector but the participants reported a lack of state resources.

Finally, the factor of luck seemed to be perceived by the participants as a source of survival support. Despite the unlikely coincidence to be among the “first generation of dyslexics” in Greece, Andrew thinks he had been generally lucky. “Mostly it was a
matter of circumstances and luck... for example I could have failed exams... Things could have been terrible; I could have failed completely and never reached this point... but teachers were flexible without knowing”. Similarly, Stelios considered himself fortunate that although “back then it was hard to be the only one who has dyslexia… I had another dyslexic student in my class”. Thus luck was also appreciated as a factor of support by some participants.

4. Conclusion

In this study a range of environmental sources seemed to participate in a highly complex, dynamic and always evolving system of support for dyslexia. Support came in different shapes, sizes and intensity, served multiple functions and took the form of a new entity which is more than the sum of its parts. Contrary to traditional understandings, there did not seem to be one dominant model of support; rather a mixture of different assumptions was dynamically involved in the process of coping forming a transactional model of support. The transactional model perceived changes in the nature of the involved environmental agents as an integral element of the support system and acknowledged the importance of some so far neglected types of support (e.g. moral and survival support). Data analysis suggested that due to the factor of unpredictability, the notion of support needs to be extended to types of support which may not focus directly on dyslexia treatment but promote coping in some sort of way.
D. COPING STRATEGIES

In contrast to coping resources (e.g. self and support), coping strategies refer to the actual effort put by individuals in dealing with transitions; coping strategies are what people eventually do (Pearling and Schooler, 1978). Therefore, the present subchapter attempts to respond to Research Question 4 about coping strategies and the nature of coping.

<table>
<thead>
<tr>
<th>TYPES OF COPING STRATEGIES</th>
<th>INTENTIONS AND GOALS</th>
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<tbody>
<tr>
<td><strong>1. SITUATION-FOCUSED COPING STRATEGIES:</strong></td>
<td></td>
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<tr>
<td>i) Medical coping strategies</td>
<td>Such strategies aim to act at the heart of dyslexia, ‘fix’ or eliminate dyslexia characteristics using specialised methods so as to improve literacy-wise within the standard alphabetic writing system.</td>
</tr>
<tr>
<td>ii) Mainstream coping strategies</td>
<td>Such strategies aim to eliminate dyslexia demonstrations and promote literacy acquisition within the standard alphabetic writing system based though on general, non-specialised, non-standardised methods.</td>
</tr>
<tr>
<td>iii) Alternative coping strategies</td>
<td>Such strategies intent a) to modify circumstances and adjust environmental demands so as to facilitate learning and eliminate dyslexia manifestations or b) to promote successful learning or effective distribution or acquisition of messages but not necessarily via mastery of the “orthodox” alphabetic system. This category involves the utilisation of alternative means (e.g. Greeklish, symbols, pictures, gestures, visual and oral strategies) as substitutes for alphabetic system.</td>
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<tr>
<td>iv) Survival coping strategies</td>
<td>The aim of such strategies is to effectively respond to environmental demands within the alphabetic writing system but without necessarily improving in terms of dyslexia and literacy efficacy.</td>
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<tr>
<td><strong>2. PERSON-FOCUSED COPING STRATEGIES:</strong></td>
<td></td>
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<tr>
<td>Emotional and cognitive coping strategies</td>
<td>This category includes emotional responses and cognitive processes which aim to eliminate the emotional distress, change the meaning of the situation as well as contribute to literacy and learning enhancement.</td>
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<tr>
<td><strong>3. AVOIDANCE COPING STRATEGIES:</strong></td>
<td>Avoidance coping strategies can be both situation-oriented and person-oriented and aim to stay away from or prevent dyslexia demonstrations and implications.</td>
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</table>

Table 4: Types of different coping strategies

Data analysis suggested that dyslexic participants employed a wide variety of coping strategies which can be presented coherently using a framework of three broad categories and their subcategories (see Table 4). These which will be explicitly analysed below using examples from the interviews (e.g. Table 5, Table 6, Table 7, Table 8, Table 9 and Table 10) and the chapter will close with a critical commentary with regard to their operation and their effectiveness.
1. Situation-focused coping strategies

Strategies that fall under this category were mostly concerned with actions for dealing with the ‘issue’, the ‘situation’ or the ‘problem’ and could be divided into three subcategories depending on their aim and the nature of coping:

a. Medical coping strategies

This category consists of coping strategies that attempted to act at the ‘heart’ of the situation. The aim was to ‘cure’ or eliminate the dyslexia characteristics (e.g. phonological difficulties) using specialised methods in order to improve literacy-wise and respond to environmental demands within the standard alphabetic writing system. As the term suggests medical coping strategies operate within the medical model advocating that the ‘problem’ lies within individuals and demands external specialised support. Due to the focus on dyslexia characteristics medical strategies were mainly observed in areas such as reading, writing, attention and related activities.

<table>
<thead>
<tr>
<th>Medical Coping Strategies</th>
<th>Some examples:</th>
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<tbody>
<tr>
<td></td>
<td>Systematic dyslexia work with experts using specialised methods and materials (e.g. special handwriting notebooks)</td>
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<tr>
<td></td>
<td>Psychological sessions with specialists (e.g. psychologists and psychiatrists)</td>
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<td></td>
<td>Medication for attention deficit</td>
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Table 5: Examples of medical coping strategies.

To begin with, the most commonly mentioned medical coping strategies included systematic dyslexia work with experts using specialised methods and materials. For instance Stelios said: “I attended lessons (at the dyslexia institute) and I improved amazingly in a very short time”. Similarly, Hannah worked with two well-known Greek dyslexia methods: “Pavlidis’s method requires an adult next to the child to read the text twice, slower than the child; then the child reads the text once. These readings happen while using a watch. Concurrently the child is encouraged to gradually increase the reading speed. In terms of spelling \(<\epsilon>\) was /e/, \(<\alpha>\) was /a/, \(<\upsilon>\) was one /i/, \(<\eta>\) was two /i/, - extended- \(<\omicron>\) was /o/, \(<\rho>\) was two /o/ and \(<\omega>\) was /u/ and when a child attempts to write a word he/she needs to say it out loud. For example, if you want to write \(<\gamma\nu\alpha\kappa\alpha>\) [jinéka] (woman) you must say [junaika]” said Hannah. Hannah also employed Karpathiou’s method which used “visual discrimination tasks with pictures
and attention deficit exercises. The parent keeps the pace with a pen - slow pace - and there are pages with dashes and you keep on going until the pace stops and you have to mention where you are. And if you lose the pace you go back to the start. It’s an hour of concurrent play and work”. Other participants reported using materials such as specialised notebooks with extra or discontinuous lines and edges for handwriting, cards with syllables and word-picture combinations for reading.

Moreover, there were two cases that medical coping was employed in relation to emotional wellbeing. As was already mentioned in the support subchapter Dianna attended psychological sessions in the institute because the loss of her father had affected all aspects of her life including school and dyslexia. “I was going there and would talk and they showed me ways to study and ways to see things differently”. Analysis suggested that psychological sessions with professionals were not strictly restricted to emotional wellbeing but involved dyslexia treatment. In fact, Hannah claimed that she had only recently improved in terms of handwriting because of her meetings with a “psychiatrist, who suggested exercises for letters and numbers using square graph paper. I’ve noticed improvements in my handwriting; till now all letters were angled’ said Hannah.

Finally, in one case the use of drugs was reported as a coping strategy for attention deficit. Hannah said: “I took medication but there were side effects… So, I stopped it and my body got used to it. But initially I was knocked out!”

Although data analysis suggested that most participants employed medical strategies in their coping repertoire, such strategies were the least observed. This may be partly because the two eldest participants got a late diagnosis of dyslexia and never received any specialised dyslexia treatment which may have qualified them to have such techniques. However, there is a possibility that medical coping strategies were limited because participants were already in adulthood when interviews were conducted whereas medical coping strategies were mostly observed in periods close to diagnosis (e.g. childhood) (see p.243-244). Therefore there is a possibility that memory and reflecting on the past as opposed to vivid present experiences played a role.

Finally, since medical coping was mainly observed in childhood, it can be claimed that it was not a matter of personal choice because the coping plan was decided by
significant adults (e.g. parents). However, since such activities happened with the cooperation of the participants and it was what they actually did, they need to be included in the coping strategies.

**b. Mainstream coping strategies**

This category includes coping strategies that, like medical coping strategies, attempted to eliminate dyslexia demonstrations and promote literacy and learning within the standard alphabetic writing system based though on general, non-specialised, non-standardised methods.

<table>
<thead>
<tr>
<th>Mainstream Coping Strategies</th>
<th>Some examples:</th>
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<tbody>
<tr>
<td></td>
<td>- Hard work and constant literacy drilling</td>
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<tr>
<td></td>
<td>- Personal tricks (e.g. double-checking spelling, keeping slow writing pace,</td>
</tr>
<tr>
<td></td>
<td>repeating text reading to get the meaning, reading silently, making notes</td>
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<tr>
<td></td>
<td>of spelling mistakes so as to avoid repetition, preparing school reading</td>
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<tr>
<td></td>
<td>at home, getting isolated, using equipment such as highlighters, rulers,</td>
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<tr>
<td></td>
<td>pens with special points and companion books on school subjects)</td>
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Table 6: Examples of mainstream coping strategies.

The most commonly mentioned mainstream coping strategy seemed to be hard work and constant literacy drilling. “In primary I worked extremely hard,” said Hannah and similarly Stelios mentioned having finished 40 notebooks for handwriting. “I wrote numerous assays; I read several books” said Stelios. Nestor mentioned that in lyceum he studied extremely hard for exams. He even took exams “without sleeping at all the previous night”. Likewise, Andrew claimed that he put extreme effort to respond to Masters-level expectations. “I’ve never studied so much in my whole life; I used to study eight hours per day… and I observed significant improvement in written language too.” Generally speaking, these coping strategies were mentioned as effective in terms of literacy. Conversely, lack of involvement in literacy-related activities had negative implications. Hannah claimed to get gradually worse because of quitting the systematic dyslexia work, whilst Eugene said: “If you don’t work and you don’t write regularly... your mind starts forgetting it”.

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This category of non-standardised strategies seems also to include personal tricks that participants discovered to eliminate their difficulties and respond efficiently to alphabetic system requirements. For example, Nestor said: “Mostly you discover your personal rules by observing; in spelling you attempt to memorise some words or associate the spelling with pictures. Such things. For example <καλοκαίρι> (summer) is spelt with <α> and I had connected it to a train and <α> was a child which hanged out of the window; so it had to be something big. You associate pictures to words and you come up with your own rules. In reading I used a ruler or my finger; I used to hide the rest of the text and read slowly, and it was better.”. Other participants mentioned the coping strategies of double-checking spelling, keeping a slow writing pace, taking time to speak or dedicating more time to accomplishing written tasks, repeating text reading to get the meaning, reading silently, making notes of spelling mistakes so as to avoid repetition, preparing school reading at home, sitting alone, using music, highlighters, pens with special points and companion books on school subjects etc. Data analysis suggested that such mainstream coping strategies could occur after suggestions by external agents or as personal discoveries. In certain cases (e.g. Nestor’s picture-spelling association) mainstream strategies may resemble specialised dyslexia programmes (e.g. Mavrommati’s (2002) pictographic method). However, since they were used out of the framework of a systematic medical treatment, they are better seen as mainstream personal tricks. Nevertheless, this example suggests that the lines between coping efforts are not always clear-cut.

**c. Alternative coping strategies**

This category includes coping strategies that attempted to modify circumstances and adjust environmental demands which highlight dyslexia manifestations. Such coping strategies lie within social model understandings and were observable in several fields (e.g. secondary school, university, work, leisure time activities, goals and career-orientations).
Table 7: Examples of alternative coping strategies.

<table>
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<tr>
<th>Alternative Coping Strategies</th>
<th>Some examples:</th>
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<tbody>
<tr>
<td></td>
<td>• Modification of circumstances within an existing context (e.g. demanding oral exams or extra time for essays submission, giving information about dyslexia in public, exploiting strong social status)</td>
</tr>
<tr>
<td></td>
<td>• Modification of circumstances by changing context (e.g. creating a safety zone - a niche - by leaving a demanding literacy-wise context and choosing a context that facilitates the accomplishment of personal goals)</td>
</tr>
<tr>
<td></td>
<td>• Use of alternative communicational means as substitutes/complementary to the alphabetic writing system:</td>
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<tr>
<td></td>
<td>o visual means (e.g. Greeklish, pictures, sketches and symbols)</td>
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<tr>
<td></td>
<td>o aural means (e.g. audio recording of lessons, aural memorization of information)</td>
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<tr>
<td></td>
<td>o multisensory means (e.g. body gestures, facial expressions)</td>
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</tbody>
</table>

Within the educational context alternative coping strategies took the form of asking for oral exams and extra time. For example, Andrew claimed that he “attempted to get an extension of the dissertation submission” while Nestor asked for extra time for his exams in the UK. However, the participants who studied exclusively within the Greek educational system were only entitled to oral exams after submitting a statement. “I attempted to exploit the opportunity (of oral exams) that they’ve given me. I would have been stupid if I didn’t. It helped me even in mathematics in national exams, because if I made a mistake I could correct it even at the very last minute… If I was taking written exams though, they would have marked me negatively straight away,” said Eugene.

Giving information about dyslexia in order to modify ‘false’ or ‘negative’ environmental perceptions was a commonly reported coping strategy. For example Andrew said: “I always attempt to explain… to make others understand”. Similarly, Eugene mentioned: “Giving explanations made me feel more confident; because when I explained, I showed that I knew… and I explained it in such a way that it wasn’t obvious that I have a problem; basically I explained that I don’t have a problem”. Informing about dyslexia was also used as a method for modifying instructive methods that hinder learning progress. For instance, Andrew said that he informed his Spanish teacher: “I told him about dyslexia and that we need to modify teaching… many times words were not put on paper but developed in pictures”.

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Other participants exploited their social status to adjust environmental circumstances. For example, Dianna exploited her role as a class vice-president to ‘seduce’ her peers in alternative teaching methods, whilst Hannah used the fact that her mum was a teacher in her school so as to force teachers to explain in more detail. In other cases participants attempted to modify environmental responses using more drastic methods such as direct conflict. For example, Hannah fought with the mathematics teacher for more detailed explanations, whilst Nestor demanded higher marks: “I used to tell to my mathematician to grade my efforts higher than 16. ‘Give me higher grades because I’ll achieve better in the exams and you’ll be humiliated’”.

Apart from modifying circumstances within a context, alternative coping strategies involved leaving one context and entering another that facilitates the accomplishment of certain goals (e.g. career aspirations). It is perhaps no coincidence that most participants chose to change their educational circumstances by leaving mainstream education and attending technical or practical schools, which presumably have lower literacy expectations. Such contexts seemed to facilitate success because they specialised in subjects participants were good at. For example, Eugene who chose to attend a technical school, said: “I always wanted to be an accountant and exploit my inclination in mathematics”. Similarly, Dianna claimed that attending the hairdressing school “is a solution; a good alternative solution”. Even Nestor who decided to build an academic career chose a field with limited literacy demands: “Yes, it is peculiar I’m having an academic career when reading is not my strong point, but my subject is more practical, more mathematical. I like mathematics. It is a field I’ve been always good at.” Thus, it seems that participants chose to involve themselves in contexts with limited literacy demands but increased alternative options and specialisation in their areas of strength. In this way they seemed to create a safe living zone; a ‘niche’.

Besides education, attempts to create a ‘niche’ seemed to be observable in a work context in the form of negotiations for job specifications. For instance, Andrew chose a position which did not include written communication with clients: “I belong to the creative department; I communicate with clients face to face.” Similarly, Eugene and Stelios hold posts with limited literacy expectations and having chosen daily routines that do not involve much literacy. “You pass into another level and literacy isn’t involved in your daily life,” claimed Stelios.
Apart from modifications to environmental demands and perceptions, the category of alternative coping strategies includes those which are concerned with successful learning or the effective distribution and acquisition of messages but not necessarily via the standard alphabetic system. This subcategory of alternative coping strategies refers to using alternative means (e.g. Greeklish, symbols, pictures and gestures) as substitutes for the alphabetic system in communication. Such strategies seem to be based on a cognitive deconstruction of the significance attributed by modern societies to concepts such as ‘alphabetic writing’ and ‘spelling correctness’. Therefore, it can be claimed that they tend to share postmodern stances.

To start with, all participants employed Greeklish. Stelios claimed that since 2003, when Greeklish was introduced, he has been writing “solely in Greeklish”. Nestor “used Greeklish in unofficial emails and texts” and so did Andrew, although he thought Greeklish was a barrier to improving spelling.

Other participants mentioned the use of sketches and symbols as alternatives or supplementary to alphabetic writing. Hannah is an indicative example of such coping strategies because she developed a standardised symbolic writing system herself. More specifically, Hannah said: “I write using symbols because nobody could tell what I wrote; my handwriting was awful. I couldn’t understand my own letters. So, I adopted symbols because I was irritated with my letters. The word $\delta \iota \alpha \pi \rho \epsilon \omega$ [διαπέρω] (excel) is $\% \pi \rho \epsilon \omega$; $\%$ sounds [διά]. $\leftrightarrow$ means ‘to every direction’ and $\leftrightarrow$ is ‘superficial’. $\iota \sigma \omicron \omicron \sigma \omicron$ [isótopo] (isotope) is $\iota \gamma \omicron \omicron \pi \omicron$ because $\iota \gamma \omicron \omicron$ sounds [iso] and $\iota \sigma \omicron \tau \mu \omicron$ [isótimos] (equivalent) is $\iota \sigma \omicron \tau \mu \omicron$ There’s no need for many words or letters.” So it seems Hannah developed a personal writing system which combines symbols and alphabetic elements or in other words, semasiographic\textsuperscript{21} and phonographic\textsuperscript{22} writing. In fact, the use of symbol combinations such as $\iota \sigma \omicron \tau \mu \omicron$ resemble ancient rebus writing\textsuperscript{23}. Finally, Andrew took it a step further. Instead of writing words, words “were developed into sketches; for example, the teacher would say the word “tower” and I would draw

\textsuperscript{21} Semasiographic writing refers to the use of pictures or symbols as descriptive-representational devices that support direct meaning conveyance without linguistic intervention (Gelb, 1969).

\textsuperscript{22} Phonographic writing refers to the use of devices such as rebus, syllabaries and alphabetic writing which express oral speech (ibid.).

\textsuperscript{23} Rebus writing, which has its origin in ancient writing systems (e.g. Egyptians hieroglyphics), represents a word/syllable by combining pictures or symbols whose names resemble the intended words or syllables in sound (ibid.).
something like: and he’d write the word below it, so I could learn and understand more easily.” said Andrew, suggesting the use of pictographic elements.

Besides replacing or supplementing writing, pictures were employed in reading to make access to the meaning more direct. Hannah claimed she understood biology at a young age by looking at the pictures of the book. “I could explain what was happening because I was observing the pictures. I was only reading the pictures’ subtitles as a supplementary way of getting the meaning more coherently.” Similarly Dianna reported the use of sketches, diagrams and side-titles as crucial techniques of getting the meaning of text. Moreover, although most of the participants avoided reading books as a leisure activity, they did mention reading comics. For example, Nestor said: “I’ve never read an entire book in my whole life. I’ve lately read one, and it’s a comic. Pictures help; I always liked it when there are more pictures in the text. I always found it easier”. Likewise, Eugene reported: “I don’t like reading books, but I do like reading comics and newspapers”. Therefore, alternative visual coping strategies seemed to be a helpful technique for modifying the reading experience.

Pictures seemed also to facilitate other functions such as memory and information processing. Andrew mentioned that he preferred pictures to text because they are easier to keep in mind and analyse. In the same way, Dianna claimed that using sketches and diagrams and highlighting key points on the page was the only way she could memorise. “I have a photographic memory; I think of the pages as pictures and locate the page and the title”.

Apart from visual alternatives, some participants mentioned the use of aural and verbal coping strategies with written language. Hannah stated: “In school I mainly picked information from verbal instruction in the classroom. I wasn’t into books.” Hannah reported the use of aural technological means in university as an alternative to memorising, writing, reading and processing information. “Nowadays I use an audio recorder. I record everyone and everything.” Likewise, Nestor suggested he used oral memory to organise his daily activities. “I never write supermarket lists. Never! I keep everything in my mind.” Thus, dyslexic participants seemed to manage daily tasks differently from efficient literacy users.
Furthermore, multisensory means such as a combination of body gestures, facial expressions and verbal means were employed for delivering meaningful messages. For example, Hannah claimed that because university teachers ignored exam regulations for dyslexia, they requested quick answers, hardly leaving her any time to organise her thoughts. “So I played charade\textsuperscript{24} to ‘say’ what I wanted,” said Hannah.

Finally, it seems important to mention that although a limited range of alternative coping strategies was observed in childhood (see Appendix 13) there seemed to be a gradual increase. The richest repertoire of coping strategies was employed in adulthood for most of the participants, possibly because of personal maturity and decrease in literacy expectations.

**d. Survival coping strategies**

This category includes coping strategies concerned with the effective response to environmental demands within the alphabetic system but without necessarily aiming for improvements in terms of dyslexia and literacy efficacy. Survival coping strategies were most commonly mentioned in relation to literacy tasks and social wellbeing in contexts such as school, university and work.

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<thead>
<tr>
<th>Survival Coping Strategies</th>
<th>Some examples:</th>
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<tr>
<td></td>
<td>Use of cheating techniques in exams (e.g. copying from cheating sheets or peers’ exam papers)</td>
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<tr>
<td></td>
<td>Copying lesson notes from peers</td>
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<tr>
<td></td>
<td>Purchase of ready-made notes and essays</td>
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<td></td>
<td>Request for help from peers, colleagues, close friends and family members (e.g. spell-check of essays)</td>
</tr>
<tr>
<td></td>
<td>Use of automatic technological means (e.g. PC text processors for spelling and handwriting or mobile phone spellcheckers)</td>
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*Table 8: Examples of survival coping strategies.*

All participants referred to cheating in exams as a method of surviving school and university expectations. Cheating took the form of copying from hidden cheat sheets containing information such as test answers. Stelios claimed to be a “master of cheating” and Andrew stated: “Many cheat notes; I think this is how I passed most of

\textsuperscript{24} Charade is a word guessing game in which one player acts out a word or phrase, often by miming similar-sounding words, and the other players guess the word or phrase. The idea is to use physical rather than verbal language to convey the meaning to another party.
the lessons”. In other cases, participants cheated in exams by copying answers from peers sitting next to them. This is why although Stelios was entitled to oral exams in university he “chose written examinations, because in oral you cannot copy”.

Copying notes from peers was another commonly reported survival coping strategy for school and university tasks. For example, Hannah reported: “there were many lessons that I didn’t have time to write everything and so, I usually left my peer next to me to make notes and then I copied them”. Nestor said: “In university I never had enough time to write; I didn’t have my own notes. I always copied others’ notes and was never sure about what I wrote”. In some cases instead of asking for peers’ notes, participants bought notes and essays from university bookstores. Stelios said: “to have complete notes for exams means you mustn’t miss a lecture. Nowadays, you go straightaway to the shop and you find them ready; same thing with essays”.

Asking for help seemed to be a frequently employed survival coping strategy for reading, text composition and spelling. For instance, in childhood Hannah used to ask her father to read for her. Likewise, Nestor mentioned: “If I had to write an essay for homework, I would usually ask somebody - my best friend, my girlfriend - to correct the spelling.” As already mentioned, Nestor employed the same strategy for writing in adulthood, especially in official communications. Other participants reported asking for help from colleagues. For example, Andrew claimed that whenever official written communication with a client was needed he would “sent the text to a copywriter colleague first”.

It seems important to mention that asking for help can be seen as a mainstream coping strategy if the aim is to acquire learning or improve literacy-wise. For instance, Andrew said: “When I had to write my thesis I discussed it with one of my teachers; he didn’t give me a specific structure but showed me the methodological process of writing a dissertation, e.g. that I need to collect specific information from artists and start making notes of my thoughts when I read something because these will give me the conclusion of the dissertation. He showed a way of work.” Since in this specific case asking for help involved dynamic engagement in the learning process, it can be considered as a mainstream coping strategy.
Moreover, participants referred to the use of automatised technological means as survival coping strategies for spelling, text composition, handwriting, keeping notes, reading etc. For instance, Eugene said in reference to handwriting: “I use PCs very much; I don’t write by hand”. Eugene also used T9 mobile phone spellchecker: “T9 has helped me to write correctly.” Similarly, Stelios reported: “I’ve had a PC since I was very young and I composed text using Word and it corrected spelling mistakes automatically”. As seen in the survival support subchapter (see p.179-180), Hannah used internet search engines that provide automatic responses or correct spelling and a special hardware for university tasks, called Texas Instruments. “Things with ‘Texas’ are standardised. It contains Word, Excel, another programme for mathematicians, graphs, colour-code equations, points and lined colour-code maths and science concepts, etc. It has the capacity to save what you write and standardising certain words or equations.” Also: “I use it as a ‘typology notebook’. I save whatever takes lots of space.” Thus, technological means can be used as a method of surviving with environmental expectations without necessarily involving improvement in terms of dyslexia and in this sense they constitute survival coping strategies.

Building good social relations and being likeable was another survival coping strategy reported by participants. For example Nestor stated: “I realised that if I am likeable nobody would say that I can’t read but they’d say ‘What a b*%h! She’s pushing it too far although she knows,’ referring to the teacher”. However, having good social relations can be an alternative coping strategy if the intention of the agent is to enhance learning. For example, as already mentioned Dianna maintained a friendly relationship with a teacher and used to solve her enquiries outside class, modifying her learning circumstances. This example is perhaps indicative of the complexity of coping strategies and the need to consider the individuals’ intentions when categorising a strategy.

It seems important to mention that survival coping strategies were reported by all participants, gradually increasing in number as time passed. This is perhaps related to issues of maturity and control (e.g. during childhood coping seemed to rely on significant adults and as such tended to coincide with externally-determined coping activities such as medical coping strategies).
Finally, it can be claimed that survival coping strategies do not seem to lie within any of the dyslexia models found in literature, possibly because such strategies are not concerned with treating dyslexia or improving literacy-wise but rather in finding ‘tricks’ which will enable individuals to respond to environmental demands. However, since these strategies help the individual cope with dyslexia, it seems important that they are introduced in the relevant literature.

2. Person-focused coping strategies

In comparison to situation-focused coping strategies which are concerned with externally-oriented activities for treating or bypassing the situation, person-focused coping strategies are preoccupied with inner processes such as feelings and thoughts. Sugarman (2001) identified two categories of person-focused coping: developing additional coping strategies that aim to enhance personal resilience, relaxation or assertiveness, and coping strategies that alter the way the situation is perceived and assessed.

Data analysis of the present study suggested that participants with a diagnosis of dyslexia employed emotional and cognitive person-focused coping strategies. The former category of coping strategies involved feelings and internal emotional responses (e.g. withdrawal, denial, neglect, deliberate distraction) whilst the latter category was concerned with thoughts and mental processes (e.g. re-evaluation of the meaning of literacy and school success) for dealing with the dyslexia situation. In contrast to Sugarman’s (ibid.) first category of coping strategies which seems to refer solely to what it is traditionally perceived as a ‘positive’ or ‘adaptive’ way of emotional coping, data analysis of the present study suggested that emotional coping includes ‘maladaptive’ coping strategies (e.g. neglect, denial, aggression) which were also seen as ‘working’ by the specific participants. Moreover, in the context of the present study, Sugarman’s (2001) second category of coping seemed to belong to the broader category of cognitive coping strategies.

Furthermore, it is important to mention that emotional and cognitive coping strategies will be co-presented because in many occasions differentiating between thoughts and feelings as completely distinct entities seemed hard (nearly impossible). For example
feelings of apathy towards unsuccessful schooling could be associated with cognitive disregard for the value of success in school. Stelios said: “When I was young dyslexia bothered me in school. I was annoyed until the second grade of gymnasium. Then I became unconcerned. Basically, either going to school or skipping was the same to me… Simply, I didn’t care about succeeding in exams”. Stelios’s words suggest that emotional and cognitive responses tend to interrelate and co-evolve. It seems that feelings generate thoughts and thoughts generate feelings, and this is why in the present study emotional and cognitive coping strategies will be co-presented.

### Table 9: Examples of emotional and cognitive coping strategies.

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<tr>
<th>Emotional and Cognitive coping strategies</th>
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<td></td>
<td>Self-control</td>
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<td></td>
<td>Will to cope and persistence</td>
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<td></td>
<td>Self-observation of coping activates and self-awareness</td>
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<td></td>
<td>Like and dislike</td>
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<td></td>
<td>Aggressiveness and self-distraction</td>
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<tr>
<td></td>
<td>Withdrawal, denial and delusion</td>
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<td></td>
<td>Acceptance</td>
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<td></td>
<td>Indifference and neglect</td>
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<tr>
<td></td>
<td>Re-evaluation and deconstruction of social norms such as literacy and writing as a means of communication, school success, dyslexia etc.</td>
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<td></td>
<td>o Decrease in the importance of dyslexia in daily activities</td>
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<tr>
<td></td>
<td>o Generalization of dyslexia characteristics to the broader, non-dyslexic population</td>
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<tr>
<td></td>
<td>o Adoption of non-disabling understandings about dyslexia</td>
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To start with, self-control, will to cope and persistence as inner processes of coping were among the most commonly referred to person-focused strategies. For example Nestor said: “I never concentrated, even in the MSc I had to push myself to concentrate all 40 minutes”. As was briefly mentioned in the self subchapter (see p.146), Nestor claimed that having a persistent and self-disciplined personality played an important role in coping. Similar willpower was mentioned by Andrew regarding his studies. Hannah also referred to dogged determination to read a whole book. “Initially I found it hard but then I said: ‘No! I will read it.’”

Cognitive processes such as being observant, making combinations and memorising were also mentioned as useful coping strategies. Such strategies seem to form a basis for the development of subsequent problem-focused coping. For example Nestor
mentioned: “Mostly you discover your own rules, observing; in spelling you attempt to memorise words; you make connections with pictures, etc.” Likewise, Andrew mentioned self-observation and self-awareness as ways of coping. “I was aware of my problems; I’ve also realised the things that help me acquire knowledge easily and I used them to learn”. Moreover, Eugene referred to self-awareness and critical thinking as effective coping strategies for evaluating circumstances and making decisions. “I knew my capabilities and I knew the demands of accountancy.” “I wanted to enter there (accountancy school) and I was thinking rationally… I said ‘what modules do I need? What curriculum does the technical lyceum provide? Why attending a general lyceum? Does it provide what I need?’” As was already suggested in the self subchapter (see p.146-148) self-awareness emerged as an important cognitive factor in coping.

Feelings of like and dislike were also referred to as important coping strategies. Eugene determined his actions according to his preferences and stated: “I believed I should do what I like”. Similarly, Hannah stated: “I studied only biology which I liked and I looked for things on my own... and I coped efficiently”. Andrew mentioned: “I was persistent… because I liked what I was doing, so I continued”; “Art was my subject. I liked reading about artists and art movements and trying to make combinations and pull my own conclusions… I used to study eight hours per day but I liked it a lot and I observed significant improvement in written language too”. As it seems satisfaction drawn by engaging with a subject of interest tended to work as an effective coping strategy for literacy too. However, dislike and avoidance seem also to work as effective personal coping strategies. “If I didn’t like a teacher there was no way I’d touch the book. I didn’t care anymore! THE END!” claimed Hannah, who found relief from a school-related stressor in neglect. So it seems, feelings of like and dislike worked as a guide for personal wellbeing and significantly influenced coping.

Expressing feelings of aggression was also mentioned in relation to dyslexia coping. For example, Nestor used to ‘tell off’ his parents and his teachers because they pressured him ‘unfairly’. The coping strategy of coming into conflict, which was already examined in alternative coping strategies, may also be perceived as a person-focused coping strategy because it entails feelings of aggression as defence mechanisms towards environmental responses. Such feelings could be seen as forming the background for the subsequent alternative modifying activities. Hence, this is perhaps a typical example of the multi-dimensionality of coping strategies. Problem-directed coping strategies and
person-directed coping strategies overlap and categorising them strictly under certain labels seems to entail a risk of false conclusions.

Self-distraction was employed for coping in class. “I felt bad in class and this is perhaps where my lack of attention stemmed from; I was always ‘elsewhere’ as a result of denial and defence,” said Nestor. Intentional self-distraction was also employed by Hannah: “I drew on the desk; when I’d finished drawing, I tore papers. I was always doing something. I played with the pen, I chewed it. All pens were chewed; I had them for biting, not for writing; I wrote only with pencil”.

Additionally, the participants of the study mentioned introvert coping strategies such as withdrawal. For example, Dianna mentioned that she changed her behaviour and became more introverted as a result of the environmental negativity towards her difficulties, and similarly Hannah stated: “I was a child that didn’t talk much, [I was an] introvert personality; since primary school I was finger-pointed; I had learned not to talk and I continued not talking”.

Feelings such as denial were also referred to by the participants as person-driven coping strategies. Nestor stated: “I was in denial because I knew I wasn’t good at literacy and I refused to be concerned. I was certainly in denial because of all the pressure and the shame in class whenever I attempted to read and others observed”. Dianna reported creating a personal delusion as a coping strategy for school success despite the contradicting reality. She chose the theoretical branch in school regardless of her strength in science because, as she stated: “although I was good at science, I wasn’t that good at maths. So I said, ‘I’m obliged to choose the theoretical branch because it only requires hard work. If I study, I’ll pass to a university’. Basically I said ‘I’m going to study’ but I lied to myself! There was no chance I was going to study”.

Acceptance was also mentioned by participants as a coping strategy. For example, Nestor claimed he had accepted that he had to put double effort in certain subjects: “This is a routine”. Likewise, Hannah stated: “If you don’t see dyslexia negatively, you find ways of coping more easily. When you see it as an enemy and you blame it, you can’t control it. When you compromise with it and you say ‘OK, this is who I am, the problem is mine, part of me’, you’ll find ways to cope. E.g. I’m used to slips of the tongue; I don’t see it as a problem anymore.” Accepting living with dyslexia seems to
relate to cognitive coping strategies about the meaning of dyslexia and literacy, which will be presented below.

Indifference, neglect and apathy were commonly mentioned as coping strategies for stressors related to dyslexia situation. Nestor never tried to explain the causes of his literacy difficulties: “Simply, I wasn’t concerned. I neglected it. I wasn’t interested”. Similarly, Stelios said about his dyslexia difficulties: “I did not care much; it left me indifferent”. Hannah stated: “I am not concerned anymore about the spelling mistakes I make”. As already mentioned in the self subchapter (see p.145-146) being zamanfou and relaxed was appraised by Stelios as contributing positively to coping - especially in terms of personal wellbeing.

Coping strategies of indifference and acceptance of the dyslexia situation seems to relate to cognitive re-evaluations of the social norms about literacy. Therefore, they seem to coincide with Sugarman’s (2001) second category of person-focused coping strategies which attempt to alter the way the situation is perceived. In fact, reassessing dyslexia, schooling and literacy were commonly referred to, especially in adulthood and late adolescence, possibly as a result of maturation and personhood. However, environment seemed to play a role too because such strategies were mainly reported by Eugene and Stelios who were brothers and participated in almost all the social contexts.

Coping that attempted to change the meaning of the dyslexia situation included strategies such as decreasing the importance of dyslexia in daily life. For instance, Dianna stated: “It is not a significant issue; apart from having affected me during schooling. Since then it isn’t important. It just exists. I can do so many things. It isn’t as if I’ve lost a hand. Thank God!” Generalising dyslexia symptoms to the broader population of non-dyslexics was another way to devalue dyslexia. For example, Eugene claimed that reading movie subtitles “is tiring for everyone” and that in school “you can’t be perfect in everything; only a few are perfect… I am a middle ability student and numerous students are like this”.

Dyslexia devaluation was also achieved by adopting a non-disabling stance. For example, Eugene said: “I don’t have a problem. In my view, whoever says having dyslexia is a problem, he doesn’t know what he has”. Moreover, Eugene provided non-disabling explanations about dyslexia: “I explained that I don’t have a problem”. In his
view the mechanism of reading is not just an acquired skill but more a matter of personal inclination. In his case, there was a natural inclination for mathematics: “Look, you cannot be perfect in everything… It happened that I was good at mathematics”.

Furthermore, reassessment of the purpose of writing was also referred to. Participants mentioned that the purpose of a writing system is primarily to pass a message. Therefore, Hannah developed her own symbolic writing system and stopped worrying about orthography. Similarly, other participants mentioned the use of Greeklish or sketches instead of alphabetic writing. Such understandings seem to challenge the predominant notion of ‘correctness’ of alphabetic writing and lead to the employment of alternative means for coping with dyslexia.

Finally, demystifying the value of school success and social opinion were also referred to as coping strategies that attempt to change the meaning of the situation. For instance, Eugene focused on the significance of trying as opposed to succeeding. “Even when I didn’t succeed, I succeeded in my own way. I mean, I did my best.” Contrarily, Stelios stated that after a point he simply was not interested in school and quit any attempt to be successful. “In first grade of lyceum I decided to quit cheating because simply, I didn’t care.” Moreover, Stelios challenged the value of knowledge provided within school. “Schooling is too much pressure. I preferred to read a different book than reading the school book; a book of my choice. I believe that you learn more than what they want to impose on you.” In this way, Stelios changed his mind over the degree of social pressure that he was willing to receive. However, “when you reach a certain age you don’t care about what others say”.

Although commonly used, person-focused coping strategies seemed to involve a narrower repertoire compared with situation-focused coping strategies. This is perhaps because situation-focused coping strategies are external actions and as such more easily observable, whilst person-focused coping strategies involve internal processes that may be hard not only to monitor but also to report.

In conclusion, data analysis suggested that because of the wide variety and the internal nature of person-focused coping strategies, attempts to categorise them as a whole under a certain model of dyslexia seem to be inadequate and problematic. Emotional and cognitive coping strategies seem to act as the ‘background’ on which further ‘action’
occurs, and so, it is hard to categorise their function strictly under a model of dyslexia without taking into consideration the subsequent externalised coping strategies. For example, ‘persistence’ can be perceived as operating within multiple - even opposing - models depending on the subsequent action acquired. An individual can show persistence in working with specialised methods for dyslexia characteristics implying a medical model approach, while another may show persistence in the modification of environmental circumstances operating within a social model. Therefore, a person-focused coping strategy may fall into more than one model of coping depending on the subsequent actions of the agent.

3. Avoidance coping strategies

Avoidance coping strategies seemed to be employed in a broad variety of areas (e.g. school, university, leisure time, daily reading and writing activities). Although commonly used, avoidance coping strategies were intentionally noted at the end of the coping strategies presentation because data analysis suggested that they include both situation-focused and person-focused coping strategies. More specifically, situation-focused avoidance coping strategies seem to be concerned with escaping from the problem externally. For example, Hannah claimed that she avoided areas and activities that involve reading and writing; and Nestor said: “I’ve never read a whole book in my life”. Person-focused avoidance coping strategies tended to be directed to the self as internal processes (e.g. neglecting negative environmental comments). In this sense, many of the emotional and cognitive coping strategies mentioned above (e.g. intentional self-distraction, denial and alteration of the meaning attributed to dyslexia) could be considered as avoidance coping strategies too. However, as was mentioned before, the point is not the appropriate categorisation for such strategies; rather it is more important to gain understanding about their operation. After all, although literature differentiates between problem-focused and person-focused coping strategies, the two categories seem to be two sides of the same coin. They both aim to help the individual cope and enhance personal wellbeing.

To start with, avoidance coping strategies were commonly referred to in relation to literacy-related activities. For example, Nestor claimed that he never engaged in
activities that entail reading and writing outside educational contexts, and similarly Andrew stated: “My free-time activities were sports, did not involve reading”. More specifically with regard to writing, Stelios stated: “when the teacher would start dictating fast, I used to stop writing”. Avoidance coping strategies in relation to writing were more evident in adulthood possibly because then participants have the flexibility to circumvent literacy. Hannah said: “Nowadays I rarely write whole words”. Similarly Nestor stated: “I never write, because I know I make mistakes and I don’t like it”. Social implications are related to avoidance coping strategies for writing. Andrew said: “When I’m in public…I prefer to write in English rather than in Greek, because I’m afraid I’d make mistakes and humiliate myself”.

Avoidance coping strategies were most commonly employed with reading. For instance Dianna avoided reading in public, especially in class: “I always avoided reading. I used to say I had laryngitis”. Although Dianna would find excuses to avoid reading, other participants would simply refuse to read. For example, Eugene said: “when others used to raise their hands to read a text or a page, I was the last person to do so. And if a teacher asked me to read, I wouldn’t do it. I would refuse, there was no chance I’d read”. Needless to say that participants never included reading among their preferred leisure time activities. “Reading was not my favorite hobby” said Nestor.

Apart from reading and writing, participants employed a variety of avoidance coping strategies (e.g. hiding in class or being indifferent towards classroom activities and refusing participation) within educational contexts. For instance Hannah stated: “Lyceum didn’t concern me; I never participated, I never raised my hand! Even now in university, I might know something but there’s no way I’ll say it”. Moreover, some participants used distraction strategies to avoid participation in class. For example,
Stelios said: “Both me and Eugene were constantly playing truant from school and caused trouble”. Commonly participants quit studying. Hannah quit systematic dyslexia work as soon as she entered gymnasium and similarly Stelios gave up studying for national exams. “I didn’t feel like studying! I quit and I took exams without studying”. Finally, Nestor used to postpone studying: “Quite often I studied at the very last minute”.

Avoidance coping strategies were also employed within the family context in relation to school activities. Participants mentioned hiding marks and test results from parents as well as avoiding announcing forthcoming examinations. “I hid literacy and spelling results from my parent,” said Nestor, while Dianna stated: “I avoided saying at home that I would be taking exams”. Such coping strategies seemed to avoid literacy-related work as well as psychological pressure from parents.

Secrecy was employed with regards to social life implications. For example Dianna avoided announcing at the hairdressing school that she was dyslexic because of the social implications: “I’m not planning to talk about it because another kid that has dyslexia has received many bad comments and I don’t want to go through the same... I’ve mentioned it to some teachers - some know, but not all. It is not necessary” said Dianna. Likewise, Nestor announced he is dyslexic only when he thought it was necessary: “I don’t need to tell everyone”.

Additionally, participants employed internalised person-oriented avoidance coping strategies (e.g. feelings of denial and neglect). Nestor avoided being problematised over the etiology of his situation. “I didn’t bother to explain it. Simply, I wasn’t concerned. I neglected it.” Likewise, Dianna claimed that as an adult she was not concerned about dyslexia. “I accept it as it is.”

Avoidance coping strategies were reported by all participants across all life-stages and in relation to a wide range of activities. In fact some participants (e.g. Dianna and Stelios) showed a stable preference and a rich repertoire of avoidance coping. Therefore, although avoidance coping strategies are traditionally considered as being ‘disengaging’ or ‘inefficient’, the widespread utilisation of such strategies across different contexts and life phases may suggest that their employment does not
necessarily constitute ‘bad’ coping. Rather, avoiding facing a ‘problem’ may be an appropriate way of coping under certain circumstances.

Finally, it seems that both situation-orientated and person-orientated avoidance coping strategies have tended to be neglected by the dyslexia literature. However, since they seemed to actually facilitate coping, they should perhaps be included.

**Critical commentary on coping strategies**

This section reflects on the proposed classification, explores the operational properties of the coping strategies and examines the factors that influence the employment of coping strategies.

Reflecting on the classification of the coping strategies which were employed by the adult participants with dyslexia, it should be acknowledged that this was neither a simple nor an unproblematic process. As has been already suggested a specific coping strategy could be categorised under different labels depending on its function. Moreover, there seem to be cases that the same coping strategies may serve more than one function at the same time, making categorising a demanding task. For example, technological means such as automatic spellchecking can be considered as a survival coping strategy because they help the individual cope with literacy demands without necessarily improving spelling. However, Eugene claimed to have learnt spelling by observing automatic corrections. “T9 corrected my spelling; I saw the correct spelling and I learnt it,” he said. In this case automatic spellchecking can be seen as a mainstream coping strategy that enhances literacy. The difficulty in categorising certain coping strategies under a specific label is perhaps more evident in the case of person-driven strategies such as withdrawal, self-distraction, personal delusion or denial of dyslexia. Initially, such strategies can be easily seen as emotional-cognitive coping strategies. But having a closer look suggests that they include aspects of evasion and so they can be considered to be avoidance coping strategies. Hence, it can be suggested that very commonly categorising a coping strategy depends on its functional details, without excluding the chance of serving several functions simultaneously. However, as stated before, the aim is not to accurately categorise coping strategies under definite labels but to explore how they operate (see Table 11).
Table 11: Characteristics of the operation of coping strategies.

- Coping strategies cannot be categorized under certain labels without considering their functional details
- Multiple coping strategies tend to interact dynamically creating an emergent entity; a system of coping strategies which is more than the sum of its parts
- The system of coping strategies is constantly predisposed to change

So, it seems that coping strategies do not operate on a single level or in isolation but rather they tend to serve multiple functions and work in co-operation, building a complex matrix of coping. An example will possibly shed more light on the dynamic collaboration of multiple coping strategies for dyslexia: Hannah suggested that she preferred watching movies at home “so as to press rewind” if she missed a subtitle. At the cinema she concentrated more on reading the subtitles than actually watching the movie. Eventually, she quit reading subtitles. “After all, subtitles are not accurate translation,” she said. Instead, she would listen to the movie in English and when she didn’t understand a phrase, attempted to guess the meaning based on the context and elements such as the tone of the actor’s voice and the scene-picture. The activity of ‘watching a movie’ involved a sequence of different types of coping strategies such as avoiding the cinema, choice of an alternative context (home), avoidance of reading, cognitive demystification of the capability of written text to accurately re-enact oral speech, critical cognitive judgment based on the general context, and alternative means such as aural (e.g. listening to dialogues) and visual techniques (e.g. observing the scenes). Apart from the employment of a wide range of different coping strategies, it seems important to mention that while coping with watching the movie, Hannah did not make any distinction between the employed strategies. Rather, strategies seemed to be tied together and perceived as a whole.

It seems to be the case that the selection of these coping strategies is neither a simple nor necessarily a conscious process. In fact, it seems that the selection of a specific set of coping strategies for reading is underpinned by other emotional and cognitive coping strategies such as self-observation, realisation and acceptance of reading difficulties, dislike of reading, evaluation of the environmental demands, self-observation in terms of inclinations, preferences and alternative methods that facilitate communication,
cognitive choice to use such methods so as to cope, etc. Thus, coping with reading is not simply a selection of coping strategies but rather a highly complex process of interrelated strategies that tend to work together, interact dynamically and create a new entity. The new entity has unique characteristics and seems to be more than a sum of its parts because it is perceived as a whole. Although categorised under certain labels for the sake of in-depth exploration, coping strategies are neither straightforward nor distinct entities that operate in isolation. On the contrary even an ostensibly ‘simple’ process of coping may involve different types of interrelating strategies which operate on multiple levels (e.g. emotional and cognitive strategies could operate in the background whilst medical strategies are in the foreground) forming a complex and dynamic ‘system of coping strategies’.

Needless to say that the repertoire of coping strategies - even with regard to a single aspect of the dyslexia situation - tended to be differentiated depending on the circumstances. For instance, Stelios stated in reference to reading in class: “I would read if I didn’t have a choice. In other cases I would leave the class. It depended on the teacher. To some teachers I would say I’m dyslexic while to others that I was bored. To some teachers though I couldn’t say such things and unavoidably I read”. Thus, the teacher’s ‘strictness’ seemed to define whether Stelios would choose a medical, an avoidance or a survival coping strategy. Further data analysis suggested that generally Stelios demonstrated an even broader context-defined repertoire of coping strategies with regard to reading, such as medical coping strategies (e.g. systematic work on reading in the dyslexia institute), mainstream coping strategies (e.g. hard work at home), avoidance coping strategies (e.g. avoiding reading in leisure time), alternative coping strategies that modify the reading experience (e.g. using music while reading at home) and emotional coping strategies (e.g. indifference to comments in class with regard to his reading efficacy).

Besides circumstances, other factors seemed to influence the employment of coping strategies (see Table 12). More specifically, coping strategies seemed to vary depending on whether the context was official or unofficial. For instance, Andrew stated: “Coping strategies are not the same in official contexts such as work and in unofficial contexts such as being with your friends; [with friends] even if you spell something wrong, there’s no problem”. Stelios said: “In an official document you’ll definitely go back to check the spelling but if it’s an unofficial email…” It seems that in official contexts
Stelios complied with the standard alphabetic system using mainstream (e.g. hard work) and cognitive coping strategies (e.g. observation) whilst in unofficial contexts he used alternative means such as ‘Greeklish’ and survival coping strategies such as automatic spellchecking. “I’ve had a PC since I was very young and I composed text using Word and it corrected spelling [automatically].” In the same way, although Nestor in the unofficial context avoided writing as much as he could, in the official context he employed different strategies: “When it comes to something more official, I’ll write it with my best friend”. Thus, it seems that contextual demands seem to determine the selection of coping strategies; official contexts were usually characterised by medical, mainstream and survival coping strategies whilst unofficial contexts tended to be related to alternative coping strategies.

Furthermore, factors such as time and life-stage seemed to influence the system of coping strategies. More specifically, data analysis suggested that strategies for coping with the dyslexia situation tend to evolve over time. A representative case-oriented life-

<table>
<thead>
<tr>
<th>Factors that are related to changes in the system of coping strategies</th>
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<tbody>
<tr>
<td>• Circumstances (e.g. teachers’ strictness)</td>
</tr>
<tr>
<td>• Context (e.g. official and unofficial contexts)</td>
</tr>
<tr>
<td>• Time and life-stages</td>
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<tr>
<td>o Evolution of the nature of dyslexia over time</td>
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<tr>
<td>o Different environmental demands with regard to literacy in different life-stages</td>
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<tr>
<td>o Different epochs and decades as sources of different understandings and support for dyslexia</td>
</tr>
<tr>
<td>o Different levels of environmental support and personal control in different life-stages (e.g. phases of dependence, counterdependence, independence and interdependence).</td>
</tr>
<tr>
<td>• Subjective circumstances and personal important events (e.g. health or family issues)</td>
</tr>
<tr>
<td>• Diagnosis of dyslexia</td>
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Table 12: A synopsis of the factors that were suggested to contribute to the dynamic evolution of the system of coping strategies.
course example will perhaps shed light on this suggestion. More specifically, as can be seen in the synoptic Table 13 and the corresponding

<table>
<thead>
<tr>
<th></th>
<th>Childhood</th>
<th>Adolescence</th>
<th>Adulthood</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dyslexia</strong></td>
<td>5MED 1MAIN 1EM/COG</td>
<td>1AVOID 3EM/COG(1CH)</td>
<td>1AVOID 4EM/COG(2CH) 1ALT</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>1MED 1MAIN</td>
<td>2SURV 1AVOID 1ALT 2EM/COG(1CH)</td>
<td>2MAIN 3EM/COG(1CH) 1AVOID 3SURV 1ALT</td>
</tr>
<tr>
<td><strong>Reading</strong></td>
<td>2MED 1MAIN</td>
<td>2SURV 3AVOID 3EM/COG(1CH)</td>
<td>1MAIN 1AVOID</td>
</tr>
<tr>
<td><strong>Attention</strong></td>
<td>-</td>
<td>3ALT</td>
<td>-</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>-</td>
<td>-</td>
<td>1MAIN 1ALT 1EM/COG</td>
</tr>
<tr>
<td><strong>School/ university</strong></td>
<td>1MED 1MAIN 1COG/EM(1CH) 1SURV</td>
<td>4SURV 6AVOID 2MAIN 1ALT 7EM/COG(2CH)</td>
<td>3AVOID 6SURV 2EM/COG</td>
</tr>
<tr>
<td><strong>Work</strong></td>
<td>-</td>
<td>-</td>
<td>2SURV</td>
</tr>
<tr>
<td><strong>Foreign languages</strong></td>
<td>1ALT 2AVOID 2EM/COG</td>
<td>2AVOID 1ALT 2EM/COG</td>
<td>-</td>
</tr>
<tr>
<td><strong>Goals</strong></td>
<td>-</td>
<td>1SURV 2AVOID 1MAIN 1ALT</td>
<td>1AVOID 1SURV 1EM/COG</td>
</tr>
<tr>
<td><strong>Social status</strong></td>
<td>-</td>
<td>-</td>
<td>3EM/COG(1CH) 2AVOID</td>
</tr>
<tr>
<td><strong>Emotional wellbeing</strong></td>
<td>-</td>
<td>-</td>
<td>2EM/COG</td>
</tr>
<tr>
<td><strong>Leisure time</strong></td>
<td>-</td>
<td>-</td>
<td>1AVOID</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>9MED 4MAIN 1SURV 1ALT 2AVOID 4EM/COG(1CH)</td>
<td>9SURV 15AVOID 7ALT 17EM/COG(5CH) 3MAIN</td>
<td>4MAIN 16EM/COG(4CH) 10AVOID 12SURV 3ALT</td>
</tr>
</tbody>
</table>

Table 13: A synopsis of Stelios's system of coping strategies.25

detailed tables and concept map in Appendix 16, in childhood Stelios seemed to mainly employ medical coping strategies (e.g. special textbooks, fine movement exercises, speech therapy, phonological awareness exercises) because of the specialised support he received at the dyslexia institute. “I took lessons [in the institute] for two years and I saw great improvement,” he said. In adolescence though, he escaped close parental and professional surveillance and changed coping mode, showing preference for avoidance strategies (e.g. he quit specialised dyslexia treatment) and survival coping strategies (e.g. cheating in exams, use of Greeklish and automatic PC spellchecker). Such coping strategies seemed to be based on emotional processing and cognitive re-conceptualisations of the dyslexia situation and the significance of school success. “I

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25 MED = Medical coping strategies, MAIN = Mainstream coping strategies, AVOID = Avoidance coping strategies, ALT = Alternative coping strategies, SURV = Survival coping strategies, EM/COG(CH) = Emotional/Cognitive coping strategies (Strategies that attempt to change the meaning of thoughts). Latin numbers refer to different coping strategies, not frequency.
stopped caring about getting good school results; I wasn’t interested” said Stelios, who gradually even quit survival coping strategies at school. “At first grade of lyceum I decided to quit cheating sheets, because I couldn’t use a cheating sheet without knowing what it was about; at that point I quit studying completely.”

Finally, in adulthood Stelios claimed to use emotional and cognitive deconstructive coping strategies as a basis for his coping with literacy and university demands. He also employed avoidance coping strategies and survival coping (e.g. purchase of university notes and essays). His coping strategies system was supplemented by mainstream coping strategies (e.g. personal tricks for text memorisation) and alternative coping strategies (e.g. Greeklish). Stelios’s case suggests that the coping repertoire tends to evolve along with growing up when different sets of coping strategies interact dynamically and create an emergent complex system of coping strategies.

Further data analysis suggested that some participants showed a preference for a certain type of coping strategies. For example the cross-case table in Appendix 13 suggests that Dianna had shown a stable preference for avoidance coping strategies throughout her life. Moreover, after escaping from the medical supervision of childhood, Stelios and Eugene moved towards a repertoire of person-focused emotional and cognitive coping strategies, followed by avoidance and alternative coping strategies respectively. However, a detailed examination of the systems of coping strategies (see Appendices 9, 13, 16 and 17) suggested that even in these cases there were significant differences in the coping strategies repertoire across life-stages; new coping strategies emerged (e.g. emotional/cognitive coping strategies), some existing strategies were paused (e.g. medical coping strategies) and the synthesis of supplementary coping strategies changed too. Moreover, the cross-case analysis of all six cases suggested that coping was an unstable entity for all of the participants; as time passed different coping strategies seemed to emerge while others were paused, forming a flexible synthesis of coping strategies that interacted dynamically and generated a complex new entity: a system of coping strategies. The evolving nature of this system of interrelated coping strategies suggests a transactional mode of coping. In fact, Nestor stated: “Generally across a life-span coping is transactional, if you think of it from the beginning till nowadays”.

More specifically, changes in the system of coping strategies in different phases seemed to be a function of changes in the nature of dyslexia in terms of characteristics. As was
suggested before (see Situation, p.160-161), dyslexia characteristics are not static; rather there seems to be a ‘progression’ which includes both improvements and deteriorations in a non-linear and reversible mode. Such changes tended to reinforce changes in the system of coping strategies. For example, initially Eugene attended specialised dyslexia support “for two years. Then I quit because at that point I was a mild case of dyslexia and I didn’t have any important problems,” said Eugene, suggesting his improvement in literacy was accompanied by changes in coping.

The system of coping strategies seemed also to evolve as a function of the differentiated environmental expectations across life-stages. Andrew stated: “I realise that coping mostly relates with time periods... and daily routines; “my personal experience at least is that you interchange coping styles in different periods in your life”. This is possibly because as Stelios claimed, as you grow up “you pass into another level” and literacy may not be involved that much in your daily reality. In other words whilst in school efficient reading and writing was demanded, in university other activities (e.g. typing) are required. “I’m doing well in typing, I don’t have a problem,” said Stelios. As a result, whilst in the past Stelios was forced to employ medical coping strategies to cope with literacy, as an adult he employed survival, avoidance and emotional/cognitive coping strategies.

However, differentiation of coping strategies tended to be related to another aspect of circumstances; that of different epochs and decades, which come with different awareness, understandings and support resources for dyslexia. As has already been suggested in the support subchapter (see p.203) in Greece an increased number of dyslexia institutes were established within the last few years and recent technology has facilitated coping with literacy. “As time passes things evolve. There are methods through PCs that motivate kids to work. Kids go crazy!” said Stelios, indicating the advances in relation to dyslexia. Therefore, differences in participants’ ages suggested growing up in different decades, and so having different opportunities and limitations in terms of support. For example, Andrew and Nestor, 32 and 29 years old respectively, attended school a decade before younger participants. Public awareness about dyslexia in the early 1980s was limited or even non-existent in comparison to the 1990s when the rest of the participants attended school. Such differences in time period characteristics seem to influence individuals’ system of coping strategies.
Besides differences in resources due to the time period, coping strategies systems seemed to be influenced by differences in the degree of support and control across life-stages. As was already mentioned in the self subchapter (see p.146-147) different life-stages tended to be accompanied by different levels of control and responsibility over coping. In fact, data analysis suggested that environmental control over coping gradually decreased as personal maturity developed. Childhood seemed to be a phase of dependence (Kincade, 1987) and mainly characterised by a repertoire of medical and mainstream coping strategies (see Appendix 13) because significant others seemed to be primarily responsible for coping.

Adolescence seemed to coincide with the phase of counterdependence during which control over coping is negotiated between individuals and environmental agents. During this period medical coping strategies seemed to be significantly reduced or even abandoned (except for Dianna who got an official diagnosis in adolescence). For instance, Hannah claimed that she quit specialised dyslexia work with her mother after leaving primary school. “In gymnasium I didn’t do any specialised work for dyslexia. I quit because I couldn’t stand it.” During adolescence an extended emotional and cognitive repertoire of coping strategies was reported (see Appendix 13) across cases, possibly because of the individuals’ internalised attempts to understand and control their situations. The avoidance, alternative and survival coping strategies repertoire seemed to be significantly richer than in childhood. For example, during this period Hannah coped with dyslexia using alternative strategies such as constructing her own symbolic writing system and employing aural skills. “Whatever I learned, I learned it by listening to teachers’ instruction in class”. However these are just a few coping strategies from the complex matrix of coping strategies that Hannah developed during this period (see Appendix 17).

Finally, adulthood seemed to coincide with the phase of independence. As mature adults the participants seemed to undertake full responsibility for coping. They also had complete freedom in choosing from a range of coping strategies those that seemed most appropriate for them based on personal appraisal. This is not a simple or ‘recent’ operation; rather while growing up individuals tended to detect through cognitive processes (e.g. self-observation) the coping strategies that are more effective for them, and make (conscious) use of them. Andrew said: “Knowing my problems, I had realised the things that make me absorb ideas easily, generally text; many times words were not
put on paper but developed in pictures.” Cross-case analysis suggested that during this period the widest range of coping strategies were person-focused and alternative ones. However, in adulthood the number of reported coping strategies seemed to increase and participants tended to utilise widely almost all types of coping strategies (except medical). This perhaps suggests that the final phase of interdependence was reached. In this phase the contribution of environmental support over coping is acknowledged (e.g. Hannah receives medicalised psychological treatment and Andrew asks for colleagues’ help) along with personal efforts. Therefore, dyslexic adults seemed to utilise a rich and complex system of multiple interrelated coping strategies of all types which as a fact perhaps suggests a transition from mechanistic externally-driven coping in childhood to a vast internalised repertoire of coping strategies in adulthood.

At this point it seems important to mention that due to the complex, evolving nature of the system and the sample limitations, any attempt to extract fixed generalizable suggestions about certain coping strategies used at certain life-stages seems to be difficult and problematic. Furthermore, it should be clarified that Table 13 and the tables in Appendices 9, 13, 16, and 17 do not refer to frequency but to the numbers of different coping strategies mentioned by participants. Although member check process suggested that frequency of use and number of different coping strategies tended to coincide, in some cases participants could not recall which strategies they used most: “I was young, I don’t remember much,” said Andrew. Therefore, frequency is perhaps an area that demands future investigation. Moreover, the role of memory in recalling past experiences needs perhaps to be considered with regard to the increase in the number of different coping strategies as time passed; recalling past memories is perhaps more demanding than reflecting on the present coping strategies repertoire. However, data suggested that the personal maturity and increased responsibility for coping that coincide with growing older seem to play an important role in the rise of the number of different coping strategies.

Moreover, ‘life stage may be a more useful concept than chronological age in examining transitions’ (Goodman et al., 2006, p.68) but as has been already acknowledged in the self subchapter (see p.142), life-stages are artificial psychological and sociological notions and so changes in coping strategies do not necessarily correspond accurately to chronological transitions from one life-stage to another. Life-stages have been used for reasons of analysis and as a convenient tool since they tend to
coincide with significant social conventions that define the degree of involvement with literacy (e.g. childhood signifies the beginning of schooling whilst adolescence comes with high literacy, school and exam expectations). Although life-stages tend to correspond with and be signified by important literacy-related events, they are chronological conventions and so they should not be perceived as absolute phases. After all, coping is a continuously evolving process and individuals tend to follow their own pace of coping and maturity as time passes.

Data analysis suggested that apart from the key socially-driven events, important personal circumstances (e.g. health status and concurrent stress) influenced the employment of coping strategies for dyslexia. As was mentioned in the self and situation subchapters (see p.145 and p.166 respectively) the severity of a health issue forced Eugene to mature, influencing his coping with dyslexia: “It helped me get over many issues which were related to dyslexia; it made me stronger,” said Eugene, who also suggested that from that point on he evaluated dyslexia as an issue of lesser importance. This reassessment of the dyslexia situation suggested that the employment of person-focused cognitive coping strategies ‘worked’ for Eugene. Needless to say important personal events may influence variably the mode of coping depending on the individual. For example, Dianna experienced depression because of the loss of her father and she employed mainly person-focused emotional and avoidance coping strategies (e.g. withdrawal, delusion), especially for dealing with the social aspects of her situation. Dianna suggested that the loss of her father had negatively influenced her perception of things including dyslexia. “It was an awful period and I couldn’t get out of it... And one thing was influencing the other... and everything was turning to be awful. Negative comments made me withdraw into myself,” claimed Dianna. With regard to the two examples, it seems logical that two different events happening to two different individuals (in terms of personality and personal circumstances) will influence coping differently. However, the point here is that significant events tend to influence the employment of coping strategies. Any attempt though to identify stable links between certain events and coping strategies seems to be difficult due to limited data.

However, an event which was common among all participants and seemed to play an important role in the employment of coping strategies was the dyslexia diagnosis. Especially in the case of early diagnosis, statements were usually followed by specialised support. So perhaps it is no coincidence that periods close to diagnosis
tended be characterised by the employment of medical coping strategies that attempted to ‘fix’ or ‘eliminate’ dyslexia difficulties. For example, Stelios was identified as dyslexic “in the second grade of primary school” after being tested at a dyslexia institute. He immediately received specialised treatment in the same institute. “For two years” he was trained in fine movements, handwriting, phonological awareness, reading, text composition etc. “I saw great improvement” claimed Stelios. As noted in Appendix 13, Stelios, Eugene and Hannah primarily demonstrated medical coping strategies in childhood due to dyslexia diagnosis and treatment. Dianna got a dyslexia statement in gymnasium showing a significant increase in medical coping strategies during adolescence.

Even unofficial diagnosis of dyslexia seemed to operate as a factor for medical coping. For instance, although Hannah got a diagnosis at the end of primary school, she received systematic dyslexia support since the beginning of her schooling because her mother had suspected dyslexia. “Look, I received a diagnosis at the 6th grade of primary school… My mum had realised what was going on, because she is a teacher. It was easy [for her] to understand that something goes wrong in mathematics and she had been training me systematically using Pavlidis’s method and Karpathiou’s methods,” said Hannah. Consequently, both official and unofficial early diagnosis seemed to be accompanied by medical coping strategies for ‘fixing’ dyslexic characteristics.

In the case of late diagnosis, participants claimed that it did not play a significant role. Andrew stated: “The diagnosis occurred too late. It never played a significant role and I never took advantage of it”. Similarly Nestor said: “Diagnosis did not affect me at all, because I was old. Perhaps it would’ve had an influence on me, if I was young. Maybe it would have influenced my parents too. But nowadays, no...” Still, Andrew admitted changing his coping strategies as a result of the diagnosis. “Double-checking reading and writing is hard. I think this process started as a result of knowing that I had dyslexia, because ‘till then I was indifferent; I didn’t pay much attention.” Therefore, although late diagnosis perhaps did not have a significant implication, it seems that it reinforced Andrew to enrich his coping repertoire with mainstream and cognitive coping strategies. Thus, data analysis suggested that for the majority of the cases diagnosis along with other factors (e.g. context, subjective circumstances, decade/epoch, and life-stages etc.) tend to be significant factors that influence the employment of
coping strategies and contribute to the dynamic evolution of the system of coping strategies.

Finally, before closing this critical commentary it seems important to make a reference to the relationship between the proposed types of coping strategies and the official models of dyslexia. Data analysis suggested that only in a few cases is there correspondence between the two structures. More precisely, medical coping strategies tend to coincide with the medical model because they aim to “cure” or eliminate dyslexia using specialised methods. Alternative coping strategies that attempt to modify environmental circumstances and demands so as to facilitate individuals’ learning seem to lie within the social model. Mainstream coping strategies in terms of personal tricks that attempt to match learning techniques to individual’s needs resemble individual learning plans, and so they can be considered as working within the social model too. However, the utilisation of alternative - substitute for the alphabetic system - communicational means (e.g. Greeklish, symbols, pictures, gestures, visual and oral strategies) for enhancing learning seems to include, besides social stances, postmodern understandings, because it tends to rely on the cognitive deconstruction of the notions of ‘spelling correctness’, ‘school success’, ‘literacy efficiency’ etc. However, postmodern perspectives are missing from the established dyslexia models, so perspectives of alternative and person-focused cognitive coping strategies have not been acknowledged. Similarly, avoidance, survival and emotional person-focused coping strategies are missing from the official dyslexia literature, possibly because they are not traditionally considered as ‘efficient’ for coping. For example, it is perhaps no surprise that survival coping strategies have not been included in the dyslexia literature since they are concerned neither with ‘curing’ dyslexia nor with efficient learning. However, such strategies were reported to be efficient in certain circumstances. Therefore, it seems important that the dyslexia literature will take into consideration how dyslexic individuals ‘actually’ cope as opposed to how scholars think that dyslexic individuals ‘should’ cope. Traditional dyslexia models should perhaps be enriched with the new emergent types of coping. More significantly though, literature should acknowledge that in reality individuals with dyslexia employ a variety of different types of coping strategies which interact dynamically, creating a new entity which evolves as time passes. Consequently, in a lifetime the system of coping strategies for dyslexia seems to lie within a transactional model, which is also missing from the dyslexia literature.
A question seems to emerge with regard to the usefulness and ‘effectiveness’ of certain types of coping strategies. Is one type of coping better than another? This issue will be explored below.

‘Effectiveness’

In the present study the ‘effectiveness’ of coping strategies tended to be a fluid and relative concept. The evolution of dyslexia characteristics and the differentiation of the environmental circumstances and demands across time were accompanied by changes in the employment of coping strategies. This change implies that what may be considered as effective or useful at the beginning of the coping process (e.g. at the beginning of primary school) may be less effective at a subsequent phase of coping (e.g. in lyceum exams). Hence, the dynamic and process-oriented nature of coping seems to render effectiveness a relative notion.

Consequently, it seems important to mention that all the different types of coping strategies mentioned above seemed to be helpful or effective for the participants’ coping efforts depending on the circumstances. Even traditionally considered ‘non-adaptive coping strategies’ such as emotion-focused or avoidance coping strategies (Billings and Moos, 1981; Dusenburg and Albee, 1988; Folkman et al., 1986; Sarason, 1973; Sarason and Sarason, 1981 in Chronister and Chan, 2007) seemed to be ‘appropriate’ for certain individuals within certain times and contexts. This perhaps explains why both emotion-focused and avoidance coping strategies have been extensively reported by the participants. For example, avoiding reading in public and hiding dyslexia from peers were regarded by Dianna as effective coping strategies because they protected her from negative environmental responses. Therefore, if a traditionally considered ‘unorthodox’ coping strategy provides relief to the individual and promotes personal wellbeing, it can be seen as ‘effective’ or (at least) useful for coping with certain aspects of dyslexia.

On the contrary, coping strategies such as problem-focused coping strategies which are traditionally perceived as effective (ibid.) may be ‘inappropriate’ for certain individuals. For instance, Hannah considered specialised systematic dyslexia work as being oppressive for a young child. “I quit because I couldn’t stand it. I was irritated, because all kids around nine o’clock would go out to play and I was always ‘engagé’ (attached) to a book”. Although systematic dyslexia work seemed to be ‘successful’ in terms of
literacy efficiency, it turned out to be ‘inappropriate’ for Hannah’s social and emotional wellbeing because it was far too demanding in terms of effort and time. “I was in primary school and I hadn’t lived childhood,” said Hannah. Contrarily, Nestor suggested that although the pressure placed upon him by the traditional instruction methods of his ancient Greek teacher was “the worst thing”, nowadays he “can read a bit more fluently because of this awful teacher”. Both examples suggest that a coping strategy may be effective for one aspect of dyslexia but less effective or even inappropriate for another, illustrating that the ‘effectiveness’ of a coping strategy is a relative concept and should be evaluated solely in relation to a specific individual within his/her context and at a certain time. The ‘success’ of a coping strategy seems to depend on the individual’s idiosyncracy, (e.g. perhaps Hannah is less tolerant of pressure than Nestor) goals, commitments and values. For example, as mentioned Stelios reported Greeklish as a very successful strategy for coping with spelling and managing with written communication, possibly because he deconstructed the notions of ‘correctness’ and literacy ‘excellence’. “Why learn spelling when technology can do the work for you?” said Stelios. Andrew though, believed that being an efficient writer is a virtue. “I admire people that talk and write nicely… It is an advantage to be able to manipulate words efficiently.” So, it is not a surprise he expressed dislike towards Greeklish. These examples suggest that the appropriateness of a coping strategy is more relevant to the individual who attempts to cope rather than whether it is considered ‘successful’ by external observers.

The role of individuality in relation to ‘effectiveness’ seems to be further supported by the fact that almost all participants stressed the following of a personal inclination as an effective coping strategy. “I believe that in order to improve you shouldn’t do what you ‘must’ but you need to follow your own inclinations… You should go your own way.” said Eugene. Similarly, Nestor focused on his strongpoint, making a niche for himself in academic mathematics. “I’ve been always more than good in mathematics… and I always liked it,” said Nestor. Other participants reported taking advantage of their strong visual perception. For example, Dianna stated: “I’m very much a visual type of learner. I think of the page and the title so as to recall a text. I use side-titles and concept maps to remember the meaning of every paragraph. There is no way I’d remember something without a concept map. Whatever I’ve learned, I’ve learned it like this.” Andrew, also, reported taking advantage of his inclination and preference for pictures and practical tasks. “A practical thing facilitates my learning more than a theoretical. I
relate this directly to dyslexia… Pictures are something that I can keep in mind and process.” This is why while learning Spanish, instead of writing, words were turned directly into sketches. Hence, it seems that following personal inclinations emerged as an effective way of coping.

Data analysis suggested that personal preferences which usually coincided with inclinations were a useful guide for ‘effectiveness’. For instance, telling Eugene to read many books so as to improve his fluency and vocabulary was ineffective. “I don’t like reading and this is why this strategy didn’t help me.” Eugene focused on his preference (mathematics) and chose to study accountancy. “I believed I should do what I like most,” said Eugene, who managed to cope effectively with dyslexia and enhance his wellbeing by working on his favorite/strongest point. Similarly, Andrew coped successfully with the advanced demands of his MA studies because of his love for his subject which seemed to be a motivating force. “I used to study eight hours per day; I liked it a lot… it was my subject. I liked reading about artists and art movements and I was trying to… come up with my own conclusion,” said Andrew. Therefore, it seems that focusing on personal likes and strong points tends to be an effective way of coping with dyslexia.

Andrew’s example highlights another coping strategy which is usually accompanied by effective outcomes. Systematic work, personal effort and regular involvement with text seem to promote effective coping within a traditional sense. “One way to improve is constant literacy drilling,” said Andrew, although acknowledging that this may not be possible in adulthood. “In my daily reality I don’t have any more time to read,” said Andrew. Similarly, Hannah mentioned that dyslexia demands systematic work; otherwise there are chances of “relapse” and “this is a law for dyslexia. After a certain point, you don’t have the time to do systematic work. You stop and dyslexia comes back, because in reality it never goes away.” The non-permanency of outcomes seems to be a drawback of systematic work. However, such a suggestion does not negate that hard work on the alphabetic writing system may be an effective coping strategy for dyslexia in terms of literacy. What perhaps needs to be mentioned is that hard work is usually more effective if it stems from the individual as a personal commitment to a goal (see Self, p.148), instead of being imposed by external agents such as parents or experts.
Finally, it must be stressed that the present study coincided with the relevant literature in suggesting that effective coping with dyslexia does not rely on a single mode of coping. Rather, efficient coping seems to be a flexible employment of different syntheses of coping strategies depending on the circumstances. Needless to say, different aspects of dyslexia require different ways of coping, making the ‘system of coping’ even more complex. Most importantly, the whole process of coping and the final coping responses tend to be a personal issue. Different individuals consider different coping modes as being ‘effective’ implying that coping is a unique experience for each individual.
CHAPTER 6:
DISCUSSION

The data analysis chapter provided a detailed and in-depth presentation of the findings. Each subchapter explored one of the major themes (self, situation, support and coping strategies) and happened to respond to different research questions. The descriptive presentation of findings in the analysis subchapters was usually accompanied by an integrated discussion or even a separate critical commentary, and so some of the main findings of the research have already been discussed in detail. However, the aim of the present chapter is to highlight the most significant aspects of the research, discuss interconnections and comparisons between elements of the four analysis subchapters and examine the possibility of integrating them into a holistic theory. Moreover, the relations of findings of the present research to other relevant research as well as the possibility of findings having implications for theory and educational or professional practice will be explored in this chapter.

At this point it seems important to clarify that suggestions made by the present study do not make any claims for statistical generalisability. Rather, with regard to theoretical implications suggestions are based on Yin’s (2003) argument for ‘analytical’ generalisation that permits generalisation of particular findings to some broader theory (e.g. the dyslexia models), whilst with regard to practical implications suggestions are based on the concepts of ‘fuzzy generalisation’ (Bassey, 1999) and ‘transferability’ (Curtin and Fossey, 2007) which advocate that the findings of a qualitative study may be applicable and transferable to other (similar) cases but without certainty.

**Main findings:**

This section will discuss the major findings of the study in relation to the research questions.
a. Dyslexia as a whole situation

Starting with Research Question 1 about the issue of dyslexia, data analysis suggested a great variation of characteristics - even with regard to a single aspect of dyslexia - making dyslexia a unique issue for each of the participants. Moreover, contrary to common literature perceptions of dyslexia as a bunch of difficulties lying in the individual, the dyslexia situation for the six adult dyslexic participants included positive aspects too (e.g. strong visual perception, practical thinking and mental agility). Additionally, dyslexia characteristics that are traditionally considered as ‘weaknesses’ seemed to be perceived positively in certain cases. For example, attention deficit was seen as having its nice moments too, especially at a young age, because it was seen as play that provides detachment from the usually boring or unpleasant classroom reality and engagement into a vivid visual fantasy of happy thoughts. Therefore, dyslexia should not be seen as a set of exclusively negative characteristics.

More interestingly though, dyslexia should not be perceived solely as a set of characteristics. Data analysis indeed suggested that the nature of dyslexia is a very important aspect of the phenomenon of coping with dyslexia and one that needs to be stressed, because apparently in Goodman et al.’s work (2006, p.56) it is solely cited in a figure (see Figure 4, p.71) without being further analysed. However, it is not the dyslexia characteristics alone that constitute dyslexia. Analysis suggested that the ‘dyslexia situation’ includes implications on both practical and emotional levels as well as circumstantial dimensions such as those proposed by the 4 S system.

Starting with the implications, this study agreed with Goodman et al.’s (2006) claims that the impact of an event tends to be more important than the event itself. Implication emerged as an important factor suggesting that it is not dyslexia in terms of characteristics that constitutes an issue to deal with, but its experience through its implications. In other words, implications bring dyslexia to light and signify the areas that participants need to cope with. Although in the 4 S system implications were mentioned as ‘impact’ and were included in ‘approaching transitions’ - the first of the three parts of the coping process (see p.70) - in the present study they were integrated into the situation factor due to their close relationship with the nature of dyslexia.

How does the ‘dyslexia’ situation demonstrate and what role does it play in the everyday life of six Greek adults with a diagnosis of dyslexia?
However, it seems important to mention that contrary to the majority of the research in the dyslexia field, the present study claims that it would be naive to think of the association between dyslexia characteristics and implications as a linear cause-and-effect relationship. In her research Riddick (2010) mentioned that dyslexic children described themselves as ‘disappointed, frustrated, sad, angry, embarrassed, etc. by their difficulties’ but difficulties were seen as the outcome of engaging with work and a consequence of other people’s responses to students’ work. Similarly, the present study suggests that implications seemed to stem from the ‘dysfunction’ between the personal dyslexia characteristics and the environment in terms of societal demands and attitudes towards literacy and the inability to acquire it. For example, phonological difficulty is not by default a problem; rather it turns into one when efficient reading is required in certain environmental contexts (e.g. school). Therefore, it seems that implications are not an exclusive product of dyslexia ‘symptoms’. Rather, it is the interaction between the nature of characteristics and the environment that co-constructs the dyslexia implications; at least at an initial level. By this it is meant that self aspects such as individuals’ assessment and responses to implications re-shape or even change what is seen as an implication.

In fact, the study suggested that personal appraisal of the situation is a very important aspect in coping; even more important than the situation itself because it defines ‘the problem’. As Riddick (2010) suggested, although students’ perceived difficulties may not accurately reflect their actual difficulties, given the importance of self-perceptions in the learning process, it is important to look at personal perceptions of dyslexia. Analysis suggested that different individuals tend to have different appraisals of the situation. Even a single individual may demonstrate different assessments with regard to different aspects of the dyslexia situation. In some cases dyslexia was seen as a problem, a barrier and a disadvantage; in others it was perceived as a gain in terms of certain characteristics (e.g. thought agility) or environmental modifications (e.g. oral exams) or even a source of fun (e.g. daydreaming) whilst in other cases it was not an important issue, either because individuals deconstructed its societal value or because they chose to live in an environment with limited literacy expectations. This suggests that personal appraisal of the situation is likely to change along with time and life-stages. In fact, the participants of the present study suggested that dyslexia was a more problematic situation during adolescence - possibly because of the school literacy expectations -
whilst in childhood and adulthood they viewed it as an issue of lesser importance or not an issue at all.

With regard to what constitutes the ‘dyslexia situation’, besides the nature and the implications, situational circumstances emerged as important factors too. Although not all eight dimensions proposed by the 4 S system were adequately documented by data some dimensions played a key role (e.g. trigger, timing of diagnosis, assessment and control over the situation) in coping with dyslexia. Similarly to the involvement of multiple factors in the construction of implications, some ‘self’ aspects such as socio-economic status and ethnicity in terms of cultural attitudes seem to relate with 4 S situational dimensions. For example, according to the study middle-class socio-economic status seemed to be associated with high literacy appraisals, increased literacy expectations, as well as increased desire for literacy acquirement. Consequently, it seemed to be related to the circumstances of the situation such as the trigger (e.g. early diagnosis) and the timing (e.g. childhood). The involvement of environmental and self factors in the constitution of the dyslexia situation is perhaps indicative of the dynamic interweaving between the themes, although these are discussed under separate themes for issues of presentation and clarity.

Summarising the information mentioned above, cross-thematic analysis suggested that the dyslexia characteristics in dynamic cooperation with environmental demands and attitudes as well as situational circumstances tended to have certain implications for individuals with dyslexia. All these factors in unison - including implications - co-construct a new state; a whole situation called ‘dyslexia’ which is more than simplistically a sum of characteristics (see Figure 13). According to the analysis, the dyslexia situation tends to be unique for each individual, because of the variety of dyslexia characteristics and the differentiation of personal circumstances. Finally, the dyslexia situation seems to evolve as time passes as a function of changes in dyslexia characteristics (including both improvements and deteriorations) and alterations in personal appraisals and environmental circumstances.

The implications of these findings will be discussed at the end of this chapter (see p.281 and p.283-284).
b. Environmental system of support

This section will discuss Research Question 2 about the role and the operation of environmental sources in the process of coping with dyslexia. In agreement with Goodman et al.’s (2006) statement, the present study claims that environmental support comes in different shapes and sizes and can be for better or worse. Although according to traditional understandings support is commonly perceived as the intentional activities that effectively facilitate the individuals’ coping efforts, the findings of the present study coincided with Goodman et al.’s (2006) suggestion about the unpredictability of the outcomes of support and extended it further. Traditionally ‘disengaging’ activities - either intentional or unintentional - may also contribute to individuals’ coping efforts. In other words, in the context of the present study support took the form of every environmental activity that is perceived by dyslexic individuals as influencing their coping regardless of the outcomes, because as has been discussed ‘efficient’ support can apparently stem from even ‘disengaging’ activities. Therefore, a variety of environmental agents and contexts (e.g. family members, friends, peers, work colleagues, teachers, school and university, diagnostic and educational systems, dyslexia institutes, private lessons, society and circumstances) seemed to operate as sources of support in relation to dyslexia.

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Which environmental factors play an important role in the dyslexic individuals’ coping efforts and how?
Moreover, similarly to Goodman et al. (2006), the present study suggests that different sources provided support of many types and various degrees of intensity. In fact, the present study develops a detailed and systematic typology of the types and sub-types of support (see Table 1) which can be schematically summarised as follows (Figure 14):

![Diagram of different types of support]

**Figure 14: The different types of support.**

With regard to the operation of support, the findings suggested that different types of support provided by a single source seem to co-emerge, interact and evolve along with other types of support provided by other environmental sources. In other words, different sources of support communicated in multiple ways and acted together as a network of factors which creates a new entity (see Figure 15). The ‘system of support’ is more than the sum of its parts, because due to the interactions between the sources, the system develops new properties and qualities. In other words, the ‘final’ mode of support is not simplistically the sum of the different types of support (e.g. alternative support + survival support + medical support) provided by different sources (e.g. school + dyslexia institute + family). In reality support tends to be an emergent ‘hotchpotch’ of assumptions and activities from multiple sources that interact transactionally and evolve because of this process too. The relationship between the system of support and the types of support from different sources resembles the relationship between a soup and its ingredients. This finding seems to coincide with one of the central tenets of the complexity theory (Radford, 2006).

Besides transformations in the system and the involved sources due to dynamic interactions, the study suggested that the system changes due to the ‘independent’ evolution of the environmental sources of support as time passes (e.g. different school levels imply different teaching staff, peers and demands). This finding suggests that support has change as an inherently integral element (Mason, 2008) and tends to be of a transactional nature.
The fluidity in the sources involved, in conjunction with the multiplicity of types of support provided by different agents makes it difficult to determine a ‘final’ mode of support, especially across the spectrum of the lifetime. This perhaps signifies that the notion of support with regards to dyslexia operates in accordance with complexity theory’s notions of non-linearity, multiplicity and unpredictability. The implications of these findings will be discussed in the relevant section (see p.282-283).

**Figure 15:** The emergent entity of support develops from the multiple interactions between the different environmental sources.

To conclude, according to the findings of this study support for dyslexia is a complex entity that stems from the multiple, dynamic interactions between a network of environmental sources, some of which will be further discussed due to the importance of their role.

**Family**

To start with, findings underlined the great significance of family as a source of support for dyslexia throughout life but especially in childhood. Parental support involved multiple types and tended to change in shape and intensity along with time and life-stages. The study suggested that one of the most important family functions - if not the most important - is psychological support in the form of emotional closeness, stability, encouragement and relief provided in the background of all other types of support throughout all life-stages. This finding about parental priority in personal wellbeing and
psychological support is in line with Riddick’s (2010, p.192) suggestion about parents acting as ‘advocates’ in cases of school difficulties and failure and ‘co-supporters in helping with their children’s learning and wellbeing’. Moreover parents can help children cope by encouraging them to ‘invest their self-esteem in alternative activities outside school’. Therefore, this study suggested that a supportive family background tends to be a key factor for emotionally healthy and successful dyslexics, agreeing with literature (Scott et al., 1992 in Alexander-Passe, 2009; Hellendoorn and Ruijssenaars, 2000).

**Educational system, school and university**

School also emerged as a key source of support due to its preoccupation with learning and literacy. Similarly to other research in the field (e.g. Edwards, 1994; Hellendoorn and Ruijssenaars, 2000; Scott, 2004; Riddick, 2000; 2003; 2010; Ingesson, 2007) all the participants of this study mentioned some level of unpleasant experiences in school, especially with regard to literacy tasks. In fact, school could be seen as the mechanism that brings dyslexia to light - prior to schooling dyslexia did not exist as a concept for the participants - and is the field within which dyslexia difficulties are most relevant due to its preoccupation with literacy but also because literacy is a prerequisite for much learning. Riddick (2010, p.193) argues that dyslexic children face difficulties in school because literacy mediates the learning environment: ‘If children don’t develop strong literacy skills they cannot access the curriculum successfully… and they cannot display their learning output successfully’. Moreover, similarly to Stampoltzis and Polychronopoulou (2009) the study suggests that difficulties seemed to be of lesser importance in primary school but gradually increased possibly because of the escalation of literacy and attainment expectations across different educational levels. Stampoltzis and Polychronopoulou (2009) however claim that in adolescence difficulties were restricted to academia, whilst the findings of the present study suggested that some negative emotional and social implications for female participants in high school due to peers’ negative reactions regarding results. The establishment of a grade-centred system in gymnasium and lyceum encouraged competition, highlighting dyslexia difficulties and provoking social and emotional implications.

However, the finding is striking about teachers’ lack of knowledge and expertise in dyslexia across all educational levels. This finding coincided with the existing literature
(Bruce, 1983; Edwards, 1994; Lappas, 1997; Constantopoulou, 2002; Seeman, 2002 in Alexander-Passe and Zimmer, 2009; Arapogianni, 2003 in Rontou, 2010; Long et al., 2007; Burden and Gwernan-Jones, 2008 in Alexander-Passe, 2008) suggesting that the majority of teachers were either completely unaware or had partial understandings and misconceptions about dyslexia. In the present study teachers’ lack of expertise was also accompanied by moral attitudes towards dyslexic students (e.g. lack of empathy and interest in learning about dyslexia, expressions of doubt when dyslexic students attained successful results, irritation towards dyslexic learning pace or habits, pathologising understandings and feelings of pity, stigmatising behaviours and non-compliance with the dyslexia examination law). Needless to say that such behaviour rendered school a ‘dyslexia unfriendly’ context. Moreover, agreeing with Bruce (1983), there was occasionally a personal interest and support from a sympathetic teacher who is remembered with gratitude but whose help was swamped by the norm of negative attitudes.

However, findings suggested that teachers should not be attributed full responsibility for this situation. As Fawcett (2005, p.13 in Alexander-Passe, 2009) suggests ‘failure to understand dyslexia is not the fault of the teacher, but can be attributed to failure to train teachers adequately’. Given the complexity and the hidden nature of dyslexia ‘it appears highly unreasonable to expect teachers to identify and remediate these difficulties without specific training’ (Riddick, 2010, p.198). Although teachers share responsibility for their attitudes, the state is also accountable. In fact, the 2000 law of the Ministry of National Education and Religious Affairs (MNER) with regard to the education of people with SEN established the Centres for Diagnosis, Assessment and Support (KDAY) which are supposed to ‘provide constant counselling support and information to teaching staff and to people involved in the educational process and in the professional training and organise informative and training programmes for parents and those having custody… in the form of informative daily seminars’ (MNER, 2000a, p.3501). However, the teachers’ almost complete lack of knowledge about dyslexia suggests that in practice there was a lack of training programmes. Participants suggested that parents received information by private dyslexia institutes whilst teachers did not receive any guidance or further training whatsoever (apart from certain cases of

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28 MNER has been renamed to Ministry of Education and Religion, Civilisation and Sports by the 85/2012 law.
29 KDAY were renamed as Centres for various Diagnoses, Diagnosis and Support for Special Educational Needs (KEDDY) by the latest 2008 SEN law.
personal initiative). Therefore, there seems to be a need for teachers’ training in the area of SpLD at both initial and in-service levels (see Implications, p.284-285).

However, KDAY/KEDDY’s responsibilities are not restricted to teachers’ training. According to the 2000 and 2008 SEN laws, these Centres are responsible for assessing individuals up to 22 years old, providing diagnosis and issuing statements, offering appropriate school placement and suggesting individual learning plans in terms of specialised teaching methods and tools as well as issuing individual surveillance reports with updates on educational methods. However, none of the participants mentioned having received differentiated curriculum or learning methods from KDAY. This finding agrees with Constantopoulou’s (2002) findings that medico-pedagogical centres did not provide any teaching guidance or suggestions about dyslexia tools and programmes. Therefore, it is not a surprise that within this study the majority of teachers utilised mainstream teaching methods following the ‘one lesson for all’ discipline which is based on a normative curriculum and text-based knowledge (Lappas, 1997). Such normative approaches tend to perceive differences in learning as weakness in responding to curriculum expectations and leave dyslexics to ‘drown’. Poole’s (2003) suggestions about a left-brained, mass-literate, rational and cognitive National Curriculum that disregards or sees as irrelevant any alternative approaches seems to adequately describe the Greek educational system. Consequently, there seems to be a need for re-conceptualisation of the nature of the National Curriculum and knowledge delivery methods. More details with regard to this suggestion can be found in the Implications section (see p.285).

Like Constantopoulou (2002), the present study suggested that there was a lack of adequate communication between diagnostic-counselling services and teachers, although KDAY/KEDDY are responsible for providing support to both teachers and parents and promoting communication between them and experts (MNER 2000a; 2008). In fact, parents seemed to be the intermediary between KDAY/KEDDY and school teachers, even if ‘it is professionals, by virtue of their institutional position, who have a greater power and responsibility for parent-teacher relations’ (Hannon, 1995, p.36). The lack of communication is perhaps encouraged by a 2000 circular recommending teachers to refer parents to KDAY in cases where they observe learning difficulties, signifying a lack of an internal mechanism of cooperation. Therefore, a new law may be needed to establish a unified diagnostic-educational framework and encourage direct
communication between teachers and specialists without forcing parents to act as go-betweens (see Implications, p.284).

The vague framework of educational policies for supporting dyslexic students in practice seems to face irregularities and gaps. The operation of KEDDY seems to be in dire straits due to their limited number, their concentration in big cities (MNER, 1994) and the lack of specialist staff (Constantopoulou, 2002; Haralabakis, 2005) which have led to long waiting lists (Markou, 1993; Haralabakis, 2005). Also, as documented by both this study and the literature (Constantopoulou, 2002; Markou, 2003), the lack of educational psychologists in schools to whom parents and teachers could refer for information and guidance, seems to contribute to the overload of work in KEDDY and the restriction of their role to diagnosis, which however was also suggested to be incomplete by some participants.

Concluding, according to all four participants who held statements of dyslexia during schooling, the support provided by the state was restricted to oral examination. The entitlement to oral examination for students with an official dyslexia statement by medico-pedagogical centres appeared for the first time in 1978 (MNER, 1978). Subsequent laws and circulars (e.g. MNER, 1985; 1990a; 1990b; 1991; 1992; 1993; 2000a; 2000b; 2008; 2009) gave further clarifications and established the oral assessment of the National Curriculum for students with official statements in classroom tests, official exams at the end of the academic year, national entrance exams for university, and university exams. The 2000 circular does prescribe that clarifications and extra time should be provided to students, if requested; however, although the four participants who held statements during school were students in 2000, no time extension in exams was reported. Instead there seemed to be cases where teachers - especially at university - denied them even the legal entitlement to oral exams. This may be because legislation on dyslexia has focused on school years and there is no separate law for the operation of universities (Stampoltzis and Polychronopoulou, 2009). The only guidance for universities comes from a 1990 circular which suggests that because of the persistent dyslexia characteristics, students with official diagnosis should be examined orally. These findings seem generate further suggestions, which will be discussed in the relevant section (see p.284).
**Dyslexia institutes and private tuition**

Taking into consideration the irregularities of the educational system, it is perhaps no surprise that private education in terms of dyslexia institutes and private home or group lessons attempted to fill the gap. Dyslexia institutes usually provided diagnosis, information and guidance for students and parents, individualised intervention based on specialised dyslexia methods and tools, and psychological support for students with dyslexia. Their assistance was appreciated by participants as a significant factor for coping. Similarly, private tuition was positively valued, although it did not treat dyslexia. Its purpose was to support individuals’ learning acquisition and help them respond to environmental demands (e.g. preparation for national exams for university entry). Although such educational structures seem to be positively valued with regard to coping with dyslexia or literacy related activities, there is some scepticism over their operation, primarily because of the lack of an independent mechanism that assesses their teaching techniques and secondly because of the financial aspects which convert the educational process to a client-seller relationship. Unfortunately there seems to be a lack of relevant research about the role of private tuition in relation to dyslexia and this is perhaps an interesting area for further investigation. Most significantly though, it is an area that policy-makers, educationalists and support-implementers need to consider, because it seems to signify some of the gaps in legislation and educational practice.

**Society**

In the present study society was seen as a source of negative implications in relation to coping with dyslexia. Broader social contexts (e.g. university, adult foreign language groups and public services) within which participants live and interact were characterised by a complete lack of awareness or partial knowledge about dyslexia, absence of interest in learning about the ‘hidden’ dyslexia difficulties, as well as negative attitudes towards them (e.g. unconstructive - even prejudicial - comments). This is not surprising if it is considered that even people closely involved in the educational processes did not have a clear understanding. Finally, society was even suggested by some participants to be the ‘constructor’ of the disabling aspects of dyslexia because it operates as a powerful community that makes judgements and imposes pathologising attitudes upon the individuals who cannot fit into the accepted literacy norms.
These findings seem to suggest certain implications which will be discussed along with the rest of the suggestions at the end of the chapter.

**c. Coping strategies system**

With respect to Research Question 3 about the ways adults with dyslexia cope in their everyday activities, the fourth ‘S’ of the 4 S system seemed to adequately address the issue. The theme of coping strategies considers what individuals actually do. The present study suggested that individuals with dyslexia employed a wide range of coping strategies which increased along with getting older. The different types could be schematically presented as follows (Figure 16; see also Table 4):

![Figure 16: The different types of coping strategies.](image)

It seems important to mention that all the different types of coping strategies were reported as being helpful or effective for the participants’ coping efforts within certain times and contexts. Similarly to the discussion of support effectiveness, the effectiveness of a coping strategy seems to be fluid and relative and highly reliant upon the appraisal of the individual within certain circumstances. In opposition to the existing literature, the findings of this study suggested that even coping strategies which are traditionally seen as ‘non-adaptive’ such as emotion-focused or avoidance copings strategies (Sarason, 1973; Sarason and Sarason, 1981; Billings and Moos, 1981; Dusenburg and Albee, 1988; Folkman et al., 1986 in Chronister and Chan, 2007) seemed to be ‘appropriate’ for certain individuals, whilst ‘orthodox’ coping strategies such as problem-focused coping strategies (ibid.) were reported as ‘inappropriate’ by certain dyslexic participants. Especially in the case of avoidance coping strategies the findings of the present study coincide with Robinson et al.’s (1995) and Lazarus’s

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30 How do Greek adults with a diagnosis of dyslexia cope with literacy and everyday activities? What coping strategies do they employ? What is the nature of their coping? (Medical, social, interactionist, transactional?)
suggestion that in some cases and for a certain time denial or an active decision not to cope may be considered as effective and beneficial coping.

Moreover, analysis suggested that a certain coping strategy may be effective for one aspect of dyslexia (e.g. improvement in literacy) but less effective or even inappropriate for another (e.g. social or emotional wellbeing). Similarly, what may be considered appropriate for one individual may be inappropriate for another and what is efficient coping in childhood may be completely inappropriate in adolescence or adulthood (Sugarman, 2001). Therefore, coping ‘strategies have their time and place’ (ibid.) and cannot be considered as exclusively ‘good’ or ‘bad’ (Goodman et al., 2006), although the conceptualisation of coping effectiveness of extreme opposites is quite common (Robinson et al., 1995). Such a finding seems to challenge traditional understandings about achievement assessment which compare personal coping to some arbitrary standards while neglecting the personal aspects of coping (e.g. personal goals and efforts). The implications of the finding about the unpredictable ‘effectiveness’ of the types of coping strategies will be discussed in the relevant section (see p.281-283).

The importance of the role of individuality with regards to the ‘effectiveness’ of coping strategies seems to be further supported by the fact that almost all participants reported taking advantage of personal dispositions (e.g. strong visual perception) and preferences as effective coping strategies. At the same time though, findings suggested that conventional coping strategies (e.g. hard work, systematic dyslexia programmes and regular literacy engagement) can enhance literacy efficiency and facilitate coping in a traditional sense. Such a finding verifies the claim of the present study that all the different types of coping may prove to be appropriate under certain conditions. Therefore, the study seems to agree with the existing literature that ‘effective coping means flexible utilisation of a range of strategies as each situation demands’ (Schlossberg et al., 1995, p.74).

According to the findings, in reality a wide range of coping strategies was employed by the participants even for a single aspect of their dyslexia situation; it seems coping strategies do not operate separately and are not always products of a conscious process. Rather, they tend to dynamically interact and be perceived by the participants as a ‘whole’. Although, the segmentation of coping and the classification of strategies in different categories may be important for reasons of analysis, assessment and
presentation of coping strategies’ operation, in reality coping strategies are neither distinct nor straightforward, posing difficulties in categorisation. However, the purpose of the study is not accurate labelling but the in-depth understanding of coping strategies’ operation. It seems coping strategies work in co-operation and build a complex matrix of relationships out of which emerges a new entity; ‘the system of coping strategies’. Similarly to the system of support, the new entity of coping strategies is more than the sum of its parts because it develops new qualities due to the transactional interactions between primary coping efforts.

The transactional nature of the coping system seems to be further supported by the dynamicity of the system which is always up for change. In fact, as was presented in the Analysis chapter (see Table 12) the participants of the present study tended to differentiate the employment of coping strategies depending on multiple factors such as environmental circumstances, contexts and time (see Figure 17).

The analysis suggested that time is a key factor for coping since the employment of different coping strategies seems to apply to different epochs, decades and life-stages. To start with, different epochs/decades seem to have different understandings, public awareness and support resources for dyslexia. Due to the dispersion of ages, participants who were brought up in different decades reported differences in opportunities and limitations in terms of support allocations which inevitably influenced their coping.

Figure 17: Factors that are related to the dynamic evolution of the system of coping strategies.
In reference to life-stages, although they are chronological conventions and should not be perceived as absolute phases since individuals have their own pace of growing up and coping, in agreement with Goodman et al.’s (2006) suggestion, the study proposes that life-stages are a useful concept for the analysis of coping transitions (compared to chronological age) because in the case of dyslexia they tend to correspond to important socio-educational events and changes in literacy demands. Both case-oriented life-course and cross-case analysis suggested that participants’ systems of coping strategies differentiated along with aging and different life-stages; some coping strategies were paused, others were abandoned completely while new emergent strategies were tested and adopted.

Time and different life stages seem to be associated with differentiation of environmental demands made upon the individuals by educational and social structures, differences in the nature of dyslexia characteristics and changes in the system of support, which unavoidably influence individuals’ system of coping strategies in varying ways. Most importantly though, as mentioned in the analysis, the system of coping strategies seems to evolve over time as a function of the differences in the degree of control and responsibility for coping in different life-stages and the power negotiations between the sources of support and the individual. The external environmental agency over coping seems to gradually decrease as an adverse function of the increase of personal control due to aging and maturity. Kincade’s (1987) phases of autonomy (dependence, counter-dependence, independence and interdependence) seem to describe adequately the evolution of the system of coping as a function of differences in control.

Finally, as can be seen in Figure 17, the system of coping strategies differentiates its consistency as a response to important personal events such as health or family issues and dyslexia diagnosis. Although the former events seem to influence coping efforts variably due to the factor of individuality, according to analysis dyslexia diagnosis was usually accompanied by specialised treatment. Especially in the case of early diagnosis, the periods close to diagnosis tended to be characterised by a rich repertoire of medical coping strategies that attempted to ‘fix’ dyslexia.

In conclusion, the findings of the present study suggest that the system of coping strategies changes as an integral element due to influences from a network of factors.
involved (see Figure 17) and the dynamic interactions between the different types of coping strategies. Although the system was broken down to several factors for issues of exploration and presentation, analysis suggested that the ‘ingredients’ of the dyslexia coping strategies system were strongly interrelated in various modes and were perceived by participants as a whole. The constant evolution and the involvement of a ‘hotchpotch’ of coping strategies seem to suggesting that ‘final’ coping is of a transactional nature. This issue will be explicitly discussed in the following section.

d. Transactional coping with dyslexia: multiplicity of interrelated factors and emergence of an evolving entity

As was discussed in the literature review, models of dyslexia and coping involved in-person, environmental/situational and subsequently interactionist approaches. Although coping theories moved even further, acknowledging transactional orientations, the dyslexia discipline has ‘stuck’ to reductionist and interactionist models. Consequently Research Question 5 emerges: Can the transactional model provide adequate insights to the phenomenon of coping with dyslexia and contribute to the field? Based on the discussion of the four S’s separately and as a whole for each participant as well as the principals of analytical and fuzzy generalisations that permit theory induction and transferability to similar cases, the present study suggests that both dyslexia practice and literature could benefit from the transactional perspective in analogous individual cases.

Starting with the systems of support and coping strategies which were discussed above, it seems that the two entities demonstrate similar operational modes, possibly because they tend to be ‘two sides of the same coin’. The types of support and the types of coping strategies seem to share similar classification structures (see Table 14). Situation-focused support and situation-focused coping strategies have exactly the same typology and content, since they are both concerned with dealing with the ‘issue’ of dyslexia externally. Person-focused support and person-focused coping strategies are both concerned with the individual in terms of cognitive, emotional and social wellbeing. Finally, avoidance coping strategies and moral support could be considered similar in that they both ‘neglect’ dyslexia and its implications. The fact that the operation of the two entities can be presented using almost the same
Typological classification further supports the suggestion that the new types (e.g. survival, alternative and moral types) should be acknowledged by the dyslexia literature as contributing to individuals’ coping. Finally, the unpredictability surrounding the effectiveness of certain activities makes even more prominent the need consider these unconventional types.

<table>
<thead>
<tr>
<th>TYPES OF COPING STRATEGIES</th>
<th>INTENTIONS AND METHODS</th>
<th>TYPES OF SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. SITUATION-FOCUSED COPING STRATEGIES:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Medical coping strategies</td>
<td>Systematic dyslexia treatment based on specialised methods so as to enhance literacy within the standard alphabetic writing system.</td>
<td>1. SITUATION-FOCUSED SUPPORT:</td>
</tr>
<tr>
<td>ii) Mainstream coping strategies</td>
<td>Elimination of dyslexia demonstrations and enhancement of literacy within the standard alphabetic writing system based though on general, non-specialised, non-standardised methods.</td>
<td>i) Medical support</td>
</tr>
<tr>
<td>iii) Alternative coping strategies</td>
<td>Modification of the environmental circumstances so as to facilitate learning and eliminate dyslexia manifestations. Focus on learning enhancement via alternative communicational means (e.g. Greeklish, symbols, pictures, gestures, visual and oral strategies) as substitutes for alphabetic system.</td>
<td>ii) Mainstream support</td>
</tr>
<tr>
<td>iv) Survival coping strategies</td>
<td>Successful response to environmental demands within the alphabetic writing system but without necessarily improving in terms of dyslexia and literacy efficacy.</td>
<td>iii) Alternative support</td>
</tr>
<tr>
<td><strong>2. PERSON-FOCUSED COPING STRATEGIES:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional and cognitive coping strategies</td>
<td>Elimination of psychological distress and cognitive handling of the situation based on either personal emotional and cognitive processes or official professional and unofficial psychological methods.</td>
<td>2. PERSON-FOCUSED SUPPORT:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i) Psychological support:</td>
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<tr>
<td></td>
<td></td>
<td>(a) Official medical psychological support</td>
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<td></td>
<td></td>
<td>(b) Unofficial psychological support</td>
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<tr>
<td></td>
<td></td>
<td>ii) Social support</td>
</tr>
<tr>
<td><strong>3. AVOIDANCE COPING STRATEGIES:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidance of dyslexia demonstrations and implications</td>
<td>Environmental stance of indifference and disregard towards dyslexia</td>
<td>3. MORAL SUPPORT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Covering of expenses related directly or indirectly to dyslexia (e.g. tuition fees for specialised or mainstream support, private home tuition and university)</td>
</tr>
</tbody>
</table>

Table 14: The correspondence between types of support and types of coping strategies.

Moreover, analysis suggested that the notions of support and coping strategies operate in similar modes that are characterised by different types of activities that co-occur and interrelate in multiple ways creating a new entity: a complex emergent system of a
transactional nature. However, it would be a mistake to reduce the phenomenon of coping to the communication between the two systems of support and coping strategies, even if these are characterised as complex, fluid or transactional. The findings of the study suggest that many more factors are involved in the process of coping which further supports the argument about the transactional model of coping.

More specifically, attempts to answer Research Question 4 suggest that in the cases of the six participants the phenomenon of coping with dyslexia involved multiple interrelated factors that co-contributed to coping. Although the study suggested four major themes, a much richer matrix of interrelated entities that come under these themes tended to be involved in coping. As mentioned in the relevant chapter, the factor of self seems to include demographic (e.g. gender, age, ethnicity and socio-economic status) and psychological characteristics (e.g. maturity and control over coping, personality, commitments and personal appraisals) which appear to influence coping. The factor of dyslexia situation includes the issue itself (e.g. the characteristics of dyslexia), implications on practical and emotional levels, as well as dimensions that refer to circumstances (e.g. events that acted as a trigger, concurrent significant events, timing, duration of situation etc.). The factor of environmental support tends to include a variety of sub-factors (e.g. family, school, university, educational and diagnostic systems, private tuition and dyslexia institutes, peers, friends, society etc.) which tend to provide different types of support and consequently variously influence coping. Finally, the factor of coping strategies involves several activities of different types that can be either person-focused and situation-focused or avoidance-oriented.

What is important though is that in the context of the phenomenon of coping with dyslexia these factors do not act in isolation or in an additive manner because they constitute the elements of the complex ‘system of coping’ (see Figure 18). This means that the systems of support and coping strategies presented above are elements and micrographies of the emergent ‘system of coping’. The system of coping emerges from multiple-level interaction between the factors involved and seems to demonstrate the transactional characteristics of complex systems (e.g. new unique qualities that cannot be explained by the sum of the factors, changes in the nature of the factors involved due to dynamic interactions between them and the system: integral evolution).

31 Which factors are involved in coping with the dyslexia situation and how?
Concerning the constant evolution of the coping system, like other systems changes in the nature of the system and the factors involved are products of interactions, as well as results of the ‘independent’ development of factors over time. For example, as was seen in the analysis, the dyslexia situation in term of characteristics is not a stable entity. Unsurprisingly, changes in the nature of the ‘issue’ tend to influence other elements of the coping system (e.g. the types of coping strategies or the types of support). In the same way, self evolves as a result of ageing. Personal growth differentiates awareness and appraisals regarding the dyslexia situation, the support allocations, the ‘suitable’ types of coping and levels of control over coping, etc. Changes in the essence of self inevitably influence other factors of the coping system (e.g. support types or coping strategies). Therefore, there seems to be a reciprocal relationship between the coping system and its elements which informs all levels. Changes in the nature of a factor overtime tend to provoke variable changes in other factors and the ‘system of coping’ as a whole and vice versa, suggesting that the system of coping is ‘inherently dynamic and transformational’ (Mason, 2008, p.37).
Moreover, since all elements demonstrate variations as a function of time, it can be suggested that coping is not a stable entity but a process which is characterised by fluidity and non-linear evolution as time passes. This finding seems to agree with Evans et al.’s (2010) suggestion that coping with a transition is a process that extends over time. Coping is neither an easy nor an automatic process. Rather it seems to involve an amazing degree of complexity. Most importantly though, the system of coping tends to have unique characteristics for different individuals due to personality differences and the involvement of multiple factors which inevitably differ due to variability in circumstances. This perhaps explains why there seems to be no one best way of coping and why reductionist medical and social models have failed to provide an agreed upon definition and intervention for dyslexia.

In contrast, the transactional model seems to provide more ‘realistic’ suggestions. During their lives dyslexic individuals participate in a variety of contexts that operate within different models (e.g. school may operate in a moral model whilst the dyslexia institute in a medical model) and so, it seems unavoidable that one’s system of coping will be influenced variably. The advantage of the transactional model lies in that it does not exclude the possibility of concurrent operation of other dyslexia models and even their synthesis being appropriate for certain individuals in certain circumstances. Contrary to simplistic polarising assumptions of battling models, it acknowledges that coping is a highly complex process of a transactional nature because in one’s lifetime it tends to be the ‘balance’ of the communications between different models from different sources (including self). In other words, transactional understandings of coping do not advocate an ‘either/or’ (e.g. medical or social) or simplistically an ‘and’ (e.g. medical and social) process. Rather the transactional model of coping argues for an ‘in conjunction’ approach that involves different perspectives in an integrated whole. In this sense it seems to provide more holistic and adequate insights about coping than reductionist or interactionist models.

Finally, the finding about the interconnectedness of elements seems to be important for the field because dyslexia literature and coping research have mainly linear causal understandings about the relationship between self and environment, perceiving environment either as a stimulus of stress or a source of support that influences the individual (Environment → Self) (Aldwin, 2007). The transactional approach permits
the exploration of the individual’s effect on the environment (see Figure 18). In this sense, the findings of this study seem to support Lazarus and Folkman’s (1984) and Aldwin’s (2007) propositions about the need to consider this so far neglected aspect of coping.

e. The transitional 4 S system as an analytic tool for coping with dyslexia

This section discusses Research Question 6 about the adequacy of the transitional 4 S model of coping as an analytical tool for explaining how individuals cope with their dyslexia situations. Although Schlossberg et al.’s (1995) model was employed as a theoretical proposition, it was not followed blindly. Rather, inductive analysis was also employed to allow data to ‘talk’ without preventing the possible emergence of new factors or the omission of others. ‘Testing’ the 4 S factors was seen as essential because the system has never been explored in association with dyslexia before. Based on the analysis findings, the present study submits that in the cases of the six adult participants the transitional 4 S system ‘works’ as an analytical tool for explaining the phenomenon of coping with dyslexia. The 4 S factors of self, situation, support and coping strategies emerged as major themes in the exploration of the phenomenon, making a difference to how individuals coped with dyslexia.

The major strength (see Table 15) of the 4 S system is that although it can examine each factor separately, it does not fail to acknowledge their function as interactive elements of a complex and dynamic ‘system of coping’. In other words, the 4 S system seems to adequately conceive and explain the characteristics and the transactional operation of the system of coping (e.g. interconnectedness of factors, emergence of new qualities, complexity, fluidity and evolution). In this sense, the model seems to provide a framework that enables holistic depiction of the complex relationships between various factors and multiple levels, and so it tends to be a propitious tool for exploring the phenomenon of coping with dyslexia in its full complexity.

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32 Does the transitional 4 S model of coping explain adequately as an analytical tool the efforts of individuals with dyslexia to cope with their dyslexia situations?
Furthermore, the model can functionally incorporate other theories. It is not only complexity theory notions of interconnectedness, emergence, change and unpredictability that seem to be compatible with the 4 S system. Rather, analysis suggested that due to its transactional perspective the 4 S model can bear within its structure the occurrence and conjunction of other dyslexia models (e.g. social and medical models) as well as the new types of support and coping strategies (e.g. mainstream, survival, moral and alternative types) which have not so far been acknowledged by the dyslexia literature. Therefore, the holistic nature of the 4 S model seems to offer a promising perspective to the exploration of dyslexia coping, since it is very different from traditional polarised models which have failed so far to provide the definite answers that they have been looking for with regards to dyslexia intervention.

As a matter of fact, the 4 S model stands against dogmatic and absolute perceptions and practices. Rather, reflecting on the findings about the effectiveness of support and coping strategies, it suggests that the extraordinary complexity and unpredictability surrounding activities does not allow for definite and universally valid solutions. The 4 S system seems to be in line with Shlossberg et al.’s (1995) argument that in practice effective coping involves the flexible utilisation of a variety of strategies. This suggestion seems to be compatible with the complexity theory’s tenet of a multiple perspectives ‘attack’ recommending a movement away from blind one-way-for-all
interventions towards ecosystemic approaches (Mason, 2008). Hitting the dyslexia situation from as many angles, levels and perspectives as possible and exposing individuals to multiple stimuli, provides better chances of acquainting them with strategies that fit their idiosyncrasies and/or the coping circumstances. The proposed methodology highlights the need to problematise, challenge traditional presumptions and resist instant condemnation of certain strategies as ‘inappropriate’.

Moreover, this methodology highlights the role of individuality. Similarly to literature (Lazarus and Folkman, 1984; Goodman et al., 2006), the 4 S system as an analytic tool stresses the importance of self in terms of idiosyncrasy, personal appraisal or ‘crisis’ in an Aristotelian sense (meaning critical judgment). The person scans the situation, the context and the proposed strategies and finally defines the choice of coping strategies - what is actually done – in contrast to traditional models that see the coping individual as a passive recipient of either medical treatment or environmental support in terms of contextual modifications. In this sense, even at a young age - although possibly to a lesser degree - the individual plays an active role in the coping process and influences the other elements (e.g. the sources of support) in the system of coping.

At this point it is important to mention that not all elements of the 4 S system theory were located in the present study nor was the same intensity of factors observed. For example, inductive analysis suggested that the notion of ‘interconnectedness’ was critical across all levels in this study, whilst Goodman et al.’s (2006) work mentioned ‘interrelationships’ solely between the four factors. Moreover, the present study highlighted the ‘nature’ of dyslexia and also suggested that not all eight dimensions of the 4 S ‘situation’ were observed in the data. However, the factor of individuality and the particulars of each case do not exclude the possibility of these elements actually playing a role in other dyslexic individuals’ coping efforts. Moreover, differences between the prototype 4 S system and the form it took in the present study may partly result from the shift from the original purpose of the model. Transitional 4 S theory was designed to provide help to individuals who were moving in or through a transition within a counselling discipline. However, in the context of the present study it was tested at the stage of ‘taking stock’ as an analytical tool without any actual intentions for intervention. Hence, the three parts of the coping process (approaching transitions, taking stock and taking charge) were not examined as a sequencing process but were integrated in the holistic framework of the 4 S factors reflecting on participants’ past
and present experiences. Therefore, approaching transition elements such as the type, the context and the impact were examined as integral parts of the situation and the support subchapters.

To finish, as it was mentioned in the Methodology chapter, complexity theory understandings have received criticism on the basis of their usefulness since they advocate for relativity and unpredictability. In the same sense, the 4 S system could be challenged as not providing any definite answers with regards to coping. However, such arguments seem to be problematic for two reasons: First, the 4 S system does not intend to come up with any fixed, universal solutions. Rather, it is a promising analytical tool for exploring and comprehending the process of coping with the dyslexia situation in-depth and holistically. It allows representation of the coping complexity and provides the opportunity for problematisation over the coping process. After all, thinking over the phenomenon seems to be more appropriate than attempting to deal with it based on unquestioned unidimensional practices. Second, based on the case-oriented data analysis the study suggests that the utilisation of the 4 S framework did come up with some certain suggestions that worked for the specific individuals (e.g. focusing on personal dispositions and creating a niche with limited literacy expectations). In other words, the actual utilisation of the 4 S model with certain dyslexic individuals manages to acknowledge the role of factors involved and the complexity of their interconnections but without being as ‘chaotic’ as it may sound in theoretical discussions because of the particulars of the certain case. In this sense, the findings of the present study about the transactional 4 S system seem to coincide with Mason’s (2008) suggestions that complexity theory can offer suggestions for practice at the present time but not guarantees for future outcomes. Therefore, given the above findings the present study suggest the 4 S system tends to be a promising analytical tool that adequately explains the phenomenon of coping with dyslexia and the field of dyslexia would benefit from its utilisation.

**Relation to other research**

As mentioned before, research in the field of coping with dyslexia is quite limited and challenging both methodologically and ethically because most projects explored coping strategies in response to dyslexia as a problematic situation, starting from a pathologising premise. The present study operates from an epistemological and
methodological standpoint that has not previously been met in the relevant literature and so there might be claims that any strict or direct comparisons between studies are ‘inappropriate’. Different paradigms shed light on different aspects of a phenomenon because in sound studies the epistemological and methodological assumptions inform all levels of the research (Crotty, 2003), including the findings. Despite the difference of perspectives though, all research in the field shares interest in the same phenomenon.

This resembles the Indian fable of the group of blind men that touch a large and mysterious creature called an ‘elephant’ to learn what it is like. Each man feels a different part such as the side or the tusk and in ignorance of the other parts believes he is experiencing the whole elephant, discounting other men's descriptions of the elephant which differ so vastly from his own (see Figure 19).

![Figure 19: Depiction of the Indian fable of the blind men exploring the unknown creature called an ‘elephant’.](image)

In research the blind men coincide with dogmatic discipline practice that rejects the importance of work done from different standpoints and the possible cooperation of different perspectives, even when all perspectives have the ‘elephant’ in common. And this is perhaps where the advantage of the present study lies. Complexity theory understandings and a transactional model of coping permit the cooperation and interaction of different perspectives within a unifying framework, without neglecting paradigmatic limitations (e.g. generalisability restrictions because of the preoccupation with the in-depth exploration of specifics). Therefore, due to the holistic nature of the present study and the mutual interest in the exploration of the phenomenon of coping
with dyslexia, some aspects of the findings can be examined in terms of similarities and differences with previous work done in the field.

In terms of coping strategies, the present study coincided in many aspects with strategies already documented in the literature. For example, the coping strategy of asking assistance from others (e.g. colleagues, family, friends) about tasks that involve literacy was extensively reported by the present study and the relevant literature (Bruce, 1983; Bauman, 1984; 1996; Brozo, 1990; Davenport, 1991; Singer, 2007; Stampoltzis and Polychronopoulou, 2009; Riddick, 2010 in Chronister and Chan, 2007).

Moreover, the use of technological aids (e.g. dictionaries, calculators, typewriters, telephones and tape-recorders) for spelling, handwriting, and making notes was also mentioned by Bruce (1983), Bauman (1984), Stampoltzis and Polychronopoulou (2009) and Cowen (1988), suggesting that technology is a promising area for supporting individuals with dyslexia in multiple ways (e.g. as a survival tool producing ready-made responses or as an alternative communicational means). Therefore, the exploration of the technological possibilities in relation to dyslexia is an imperative in this era of technological revolution.

Mainstream coping strategies in the form of ‘personal tricks’ were also mentioned by Stampoltzis and Polychronopoulou (2009) as self-improvement techniques for study skills. The suggestion of this study about ‘hard work’ being the most commonly mentioned mainstream coping strategy seems to be further documented in literature (e.g. Greenbaum, 1987; Davenport, 1991). Singer (2007) suggested working hard and committing to standards being a commonly employed coping strategy. McLoughlin et al. (2002, in Alexander-Passe, 2009) also suggested that hard work and determination are underlying factors for success at school. Cognitive coping strategies such as persistence and stubbornness were also reported as assets for coping (Gerber and Ginsberg, 1997, in Alexander-Passe, 2009).

Avoidance coping strategies such as avoiding or putting off literacy tasks were also reported to be widespread by Riddick (2010). Alexander-Passe (2004) suggested that dyslexic teenagers use avoidance as a main coping strategy. Avoidance of participation in class tasks coincided with Brozo’s (1990) findings. Bruce (1983) also reported extensive ‘camouflaging’ of difficulties in public which coincide with the secrecy
techniques commonly met in this study (e.g. denying the entitlement to oral examination so as to protect the dyslexia ‘secret’). Hiding failure from peers and parents was among Singer’s (2007) findings too, while Bauman (1996) reported avoidance of literacy as a leisure activity. Denial of the importance of literacy and adopting an attitude of indifference or neglect towards dyslexia were also mentioned by Davenport (1991) and Alexander-Passe (2008), who considered avoidance as a ‘dyslexia defence mechanism’. However, in these researches avoidance coping strategies - especially emotional avoidance such as withdrawal and non-participation - were perceived as disengaging forms of coping accompanied by low self-esteem and failure. Contrarily, task-based coping was seen as being characteristic of successful dyslexics with high levels of self-confidence. This perspective is common in the literature regarding coping strategies (Sarason, 1973; Sarason and Sarason, 1981; Billings and Moos, 1981; Folkman et al., 1986; Dusenburg and Albee, 1988 in Chronister and Chan, 2007).

However, in the context of the present study avoidance and emotional coping were not considered by default as ‘inappropriate’. Rather, in agreement with Lazarus (1999) and Robinson et al. (1995) the study suggested that due to the high degree of unpredictability, coping strategies of denial or non-participation can be considered as ‘efficient’ coping for certain individuals in certain circumstances.

Furthermore, this study does not see dyslexics as being by default stressed or depressed and this is why it questions methodologically and ethically the utilisation of inventories of ‘coping with stress’ as equivalent to ‘coping with dyslexia’ (e.g. Alexander Passe, 2006). In fact, the present study can claim that regardless of the dyslexia-type difficulties, the participants managed to live a happy life. For example, Nestor is a successful PhD student, Andrew has an inspiring job in Arts, Dianna has found her niche in hairdressing and Eugene is fulfilling his dream to become an accountant and had almost forgotten he is dyslexic until he participated in the study. This does not neglect that participants had felt stress in certain cases or periods due to their situations but they are not seen as primarily being stressed. Examples of happy, successful dyslexic individuals are found in other studies (e.g. Bauman, 1984; 1996). Contrary to the suggestion that literacy-compensated adults remain disadvantaged by dyslexic difficulties (Farmer et al., 2002; Mortimore and Crozier, 2006), Mortimore (2008) and Greenbaum (1987) mention a long list of successful talented dyslexics. Moreover, the literature review suggests that a link between academic failure and negative self-concept
is not obligatory (Burden, 2008). Therefore, it is striking that so far research on dyslexia and coping has mainly operated within a pathologising framework.

In line with such understandings, Stampoltzis and Polychronopoulou (2009) reported that some of their participants admitted making no coping efforts. This coping response was interpreted as a failure to cope, due to the predominant traditional assumptions that success comes through literacy efficacy which is acquired as a result of hard work. However, in the context of the present study the strategy of ‘making no coping efforts’ is a coping response which is based on the cognitive deconstructive choice to rest and in certain phases it can prove to be an ‘appropriate’ form of coping (Robinson et al., 1995).

In the same sense, the employment of ‘manipulating’ techniques out of class to gain teachers’ positive perceptions or the engagement in disruptive behaviours (e.g. leaving the class or school, making noise during lessons) - which were documented by Brozo (1990) also - could be regarded as ‘disengagement’ activities from an external standpoint. For the person, though, who attempts to cope such tactics may be useful for facing environmental demands. Communicating with teachers on a private basis can be seen as a way of modifying the ‘inappropriate’ classroom circumstances so as to enhance learning and prove an interest in the subject and the acquisition of knowledge. In that respect, it does not seem to be an ‘inappropriate’ coping strategy. Similarly, the utilisation of disruptive strategies from dyslexic individuals of different linguistic and cultural backgrounds suggests that these offer a chance for occasional respite, which is an integral element of the coping process. Hence, theorists and practitioners need to think about the utilisation of such strategies as opposed to instantly condemning them.

Finally, the study agrees with literature in that dyslexics are likely to be talented in creative and visual thinking (West, 1997; Davis and Braun, 1997) and that focusing on strengths and personal dispositions such as visual and artistic talents (Bauman, 1984; 1996; Alexander-Passe, 2004; 2009; Armstrong and Humphrey, 2008) athletic inclinations (Alexander-Passe, 2004; 2009) or becoming a good listener (Bauman, 1984; Brozo, 1990), tends to be an efficient coping mode. Scott et al. (2002, in Alexander-Passe, 2009) suggested that the encouragement of talents and hobbies is a key factor to success amongst dyslexics. It seems that the exploitation of personal inclinations brings ‘unbiased’ excellence in certain areas and creates the necessary conditions for personal success. Therefore, perhaps both practitioners and individuals
with dyslexia should consider that the ‘discovery’ and the ‘exploitation’ of personal dispositions and preferences are likely to contribute not only to coping with dyslexia but also to building a successful life.

The study further suggests that taking advantage of talents is related to the creation of a personal ‘niche’. Niche was defined as a safe living zone that ensures excellence in the field of personal disposition and limited dyslexia-demonstrations through minimal literacy demands. McNulty (2003) also considered finding a niche as a key means to personal wellbeing and adaptation but specified ‘niche’ as excellence outside of academia. However, the findings of the present study suggested that niche can indeed be found in academia, but in a field of personal inclination (e.g. mathematics). Stampoltzis and Polychronopoulou (2009) also mentioned the creation of a ‘viable niche’ in adolescence, which was described as the period that students take control over their situation. According to Gwernan-Jones (2011) the dramatic impact that the identification of a niche can have on the development of positive self-perception for dyslexics goes beyond the late teenage/early adulthood period. Tom’s story reported by Bauman (1984; 1996) reflects these perspectives and further supports the suggestions for successful and happy dyslexic individuals with nearly non-existent literacy skills. Such findings challenge assumptions that expertise and success in a field come solely through efficient literacy acquisition and suggest that processing of the world can happen through other communicational means (e.g. pictorial depiction, mathematical symbols or aural processing).

At this point it seems important to mention that although the present study coincided in terms of specific coping strategies with the findings of other studies which demonstrated some interesting results, the literature review suggested that majority of the relevant research has restricted coping strategies to a descriptive, experiential level without attempting to make any connections with the relevant theory (e.g. Bruce, 1983; Bauman, 1984; 1996; Greenbaum, 1987; Cowen, 1988; Brozo, 1990; Alexander-Passe, 2004; Stampoltzis and Polychronopoulou, 2009; Riddick, 2010). This is perhaps explained by the fact that such research projects constituted novice attempts in a relatively unexplored field or included coping strategies as part of their broader context.

The few studies in the field that based their research on pre-existing theoretical prepositions (Davenport, 1991; Alexander-Passe, 2006; 2009; Singer, 2007) did not
manage to depict the phenomenon of coping holistically for a couple of reasons: First, they seem to have restricted the notion of coping to coping strategies (the actual coping responses), in contrast to the present study which suggested that coping is a much more complex entity that involves a multiplicity of interconnected factors (see Figure 20). The framework of the four transactionally interrelated themes provides a holistic depiction of the complex system of coping and so constitutes a promising tool in the hands of educationalists and specialists for in-depth exploration and evaluation of the whole entity of coping. This is one of the strengths of the study.

![Diagram of coping strategies]

Figure 20: Difference in the conceptualisation of the entity of coping between most research in the field and the present study.

Second, these research projects started from a pathologising premise that viewed dyslexia as a problem and dyslexics as failing academically and being stressed (or even depressed). Such presumptions inevitably limit the investigation of the phenomenon because they tend to neglect the perspective of everyday efforts with non-problematic activities or the perspective of dyslexics being successful academically (like the participants of the present study who all succeeded to attain classes of all academic levels), as well as the perspective of dyslexics being happy without having efficient literacy levels. Therefore, their repertoire of coping strategies seems to be limited in comparison to the types of coping strategies discovered by the present study. Such limitations, though, do not deny the importance of these research projects for the field, because they had sound designs and interesting results. After all, different research
attempts tend to contribute to the understanding of the phenomenon, even if they explore the ‘elephant’ differently.

At the same time though, the majority of non-systematic and partial research in the field seems to highlight the importance of the present study because it is based on a well-grounded theoretical framework from the discipline of coping, it is consistent with the proposed paradigmatic assumptions, and most importantly it stands for the originality of its approach demonstrating some important suggestions for the field, which will be discussed in the following section.

Implications and suggestions of the study for the field

This section explores the possible implications of the study’s key findings for dyslexia and coping theory and practice.

Starting with theory, the study suggests that the perception of the ‘dyslexia situation’ as a complex entity (see Figure 13) seems to have certain implications for the dyslexia discipline, which so far tends to approach dyslexia solely in terms of genetic, cognitive or educational characteristics. It should perhaps be taken into consideration that on an everyday level dyslexia is not restricted to symptomatology but is a much more complex phenomenon that includes practical, educational, social and emotional implications as well as situational circumstances (e.g. the timing of the identification or attribution of the ‘dyslexic’ role) which are unique for each dyslexic individual. In terms of the 4 S system, which solely stresses the eight dimensions of the situation, it seems that its framework should be extended to include the ‘nature’ of dyslexia and the implications as an integral element of the situation, as far as the dyslexia phenomenon is concerned.

Moreover, the similar taxonomies of the types of coping strategies and the types of support (see Table 14) as well as the unpredictability with regards to the effectiveness of coping responses and support actions suggests the inclusion of ‘new’ types to the existing theory. As has already been mentioned, the findings of the study suggested that activities which are traditionally considered as ‘disengaging’ may indeed contribute to coping with dyslexia whilst conventional methods may prove ineffective or
inappropriate or even have ‘negative’ implications, due to the factor of individuality. Consequently, as far as support activities are concerned, although it is not surprising that survival, moral and mainstream types of support have not been mentioned so far by the official dyslexia literature because they do not aim to treat dyslexia, their contribution to individuals’ coping - even in a non-traditional way - suggest that they need to be included in the theorisation of the dyslexia models. In the same sense, perhaps dyslexia theorists should acknowledge the contribution of the non-traditional alternative, cognitive, emotional, survival and avoidance coping strategies and enrich the dyslexia literature. After all it is important to consider how dyslexic individuals ‘actually’ cope in their daily lives as opposed to how they ‘should’ cope, as this is defined by abstract theories, external agents or ‘mass-production’ dyslexia programmes.

In line with the actual operation of the phenomenon of coping with dyslexia, the present study suggests that the multiplicity of dynamic co-operations between different types of coping strategies and support activities from different sources has implications on a theoretical level with regards to dyslexia models. In literature dyslexia models usually stand as distinct and even competing entities. In reality there do not seem to be ‘pure’ models. The process of coping seems to be characterised by a blend of coexisting assumptions and practices that lie within different models and this should be perhaps acknowledged by the dyslexia theorists and educationalists who advocate the ‘superiority’ of a model.

Such suggestions tend to have implications for practice too. More specifically, the actual operation of the phenomenon of coping with dyslexia as a system of multiple interacting factors and the relativity of effectiveness of support and coping activities suggest that practitioners need to consider that there is no magic recipe or one-size-fits-all type of coping working uniformly for all dyslexic individuals. Rather, in agreement with Sugarman’s (2001) suggestions this study suggests that in practice different individuals with dyslexia tend to respond differently to certain types of environmental support and what may be considered an ‘efficient’ type of coping at the beginning of a coping process may be inefficient later on. What is more, a type of support does not have uniformly and exclusively positive or negative implications. Rather, at a given time a single type of support may have both positive and negative implications on different aspects of the situation. Based on these findings, the present study puts forward three suggestions:
First, in educational terms this perhaps suggests that teachers, parents and other professionals should not evaluate dyslexic students according to arbitrary attainment standards, which usually condemn their achievement as ‘bad’ or ‘inadequate’. Rather, primacy needs to be given to coping efforts as opposed to outcomes, and the relationship between efforts and personal goals. Moreover, individuals’ appraisal of the ‘appropriateness’ of a coping strategy needs to be taken into consideration when dyslexia support plans are designed because the ‘effectiveness’ of a coping strategy is evaluated in relation to the goals, character and circumstances of a specific individual.

Second, non-traditional activities (e.g. survival or alternative technological support such as automatic spellcheckers or Greeklish) should not be instantly judged by experts, teachers or parents as ‘inappropriate’ or ‘unsuccessful’ because such activities may indeed support individuals’ attempts to cope with the expectations of a mass-literate society.

Third, although the present study does not make any definite suggestions for the effectiveness of certain methods because of the role of individuality, it suggests a ‘methodology’ for comprehending and planning coping. As was mentioned in the discussion about the 4 S system (see p.272-273), instead of blindly sticking with certain intervention programmes as ‘solid gold solutions’ or instantly condemning ‘unconventional’ efforts, it is perhaps more useful to adopt a holistic, multi-level and flexible approach that involves the exploration of the system of coping as a whole, the challenge of presumptions, the careful consideration of methods and the identification of the (synthesis of) types of activities that seem more ‘fitting’ for a specific individual. In practice coping with dyslexia can take the form of an ‘attack’ from as many angles, levels and perspectives as possible because according to complexity theory this provides better chances of success (Mason, 2008). This approach has the advantage of enabling the individual to choose from a variety of support/coping methods, those that are most appropriate for him/her. Therefore, the study puts forward that educationalists, practitioners and dyslexic individuals should be open-minded, experimental and active, celebrating diversity and engaging with an ecosystemic ethos.

This suggestion seems to be further supported by the findings about the operation of the dyslexia situation as a ‘whole’. More specifically, understanding that dyslexia is not
restricted simply to a number of characteristics but is a whole situation that includes circumstantial dimensions and implications in several areas, suggests that support would perhaps be more efficient if support-deliverers avoided unidimensional treatments in terms of ‘cure’ or elimination of dyslexia characteristics. Instead they could acknowledge that individuals with dyslexia are called to cope with a complex matrix of issues (e.g. environmental attitudes such as lack of knowledge or interest or understanding about dyslexia) which relate directly or indirectly to literacy. Taking into consideration the set of interacting factors that co-construct the dyslexia situation on a personal level, avoiding one-size-fits-all symptomatological treatment and responding to an individual’s coping needs though a multilevel process (e.g. providing medical support for literacy and concurrently psychological support for emotional implications) seems to be a promising approach for actively supporting dyslexic individuals.

Regarding the Greek educational system, the findings of the study have raised a series of suggestions. To start with, there seems to be a need for a new systematic legislative framework with regard to dyslexia which will provide detailed guidance to teachers and practitioners concerning provision and will explicitly address the entitlements of dyslexic students across all educational levels. Furthermore, the law needs to be accompanied by a detailed code of practice regarding the administration of dyslexia equipment (e.g. teaching tools and methods) to KEDDY and schools so as to support both students and teachers’ work. Moreover, it is imperative that the law supports a unified and systematic diagnostic-educational framework and encourages direct communication between teachers and specialists and does not force parents to act as go-betweens. To pursue such purposes, it seems important that KEDDY would be staffed with an adequate number of specialists so as to operate efficiently (e.g. actively respond to the needs of students by setting and updating individual learning plans, monitoring progress and communicate with teachers, providing guidance and training).

In fact the need for teacher training seems to be among the most important implications of this study. Sawyer and Berstein (2008, in Riddick, 2010) suggested that all mainstream teachers need dyslexia awareness training to successfully integrate students in class. Training teachers is important because even if there is a detailed dyslexia policy, its implementation depends on the attitude of individual teachers (Griffin et al., 2004; Reynolds, 1995 in Riddick, 2010). Addressing teachers’ underlying attitudes and helping them understand and empathise with dyslexic students is a significant point of
training, besides imparting specific knowledge (Riddick, 2010). In fact, since support operates as a system, all the involved agents need to be informed about dyslexia and the need to support dyslexic individuals by adopting a flexible, ecosystemic perspective.

Gaining deeper understanding about dyslexics’ learning and the need for flexible teaching methods are in line with the suggestion for a non-competitive, non-grade-centred assessment system and a less centralised and prescriptive curriculum that perceives learning as an imaginative, creative, dynamic, experiential, participatory, open-ended and unpredictable process. For instance, history lessons could involve watching documentaries or students presenting projects based on internet research instead of memorising the textbook by heart. Such a curriculum encourages decentralised control and diversity of methods (Davis and Sumara, 2005) and seems to provide a good potential for supporting dyslexic students within class.

The Ministry of Education has argued that a lack of funding hinders the implementation of provisions (Citizen’s Advice Bureau, 2009). However, the organisation of information campaigns and training seminars and the encouragement of communication between teachers, parents and specialists do not seem to demand excessive funding. Rather, such actions seem to promote an inclusive, non-pathologising ethos and the will to create an educational system that provides opportunities to all students to reach their full-potential. After all, the adoption of non-conventional, alternative teaching methods by some teachers (e.g. Dianna’s history teacher) without necessarily having specialised knowledge of dyslexia suggests that solutions are easier to reach when there is open-mindedness and determination.

Finally, information about dyslexia and a shift in cultural attitudes are an imperative on a societal level too, as participants stressed. Riddick (2010) suggested that synergy between intervention, prevention and cultural shift is required. In modernity, the written language is considered as the only orthodox mean of official communication (Ong, 2002). ‘Written language is a social convention with astonishingly strong sanctions to even the smallest aberrations from the norm’ (Solvag, 2007, p.87 in Riddick, 2010). Being literate, being well-educated and being able are assumed to be synonymous (Riddick, 2001) whilst being unable to punctuate or spell well is equal to being lazy, stupid and careless (ibid.). Providing information can perhaps remove the stigma and promote alternative modes of communication as equally valued. According to the
findings of the study, on an everyday unofficial level, alternative communicational means (e.g. Greeklish and audio-recording) are commonly employed. This challenges the authority of written language and traditional pathologising understandings of dyslexia, suggesting that dyslexia is a ‘problem’ only if associated with alphabetic writing. Hence, providing information and non-pathologising perspectives towards dyslexia may improve societal attitudes and facilitate dyslexics’ coping.

In conclusion, these have been the theoretical and practical implications of the key findings of the present study. The unique contribution of the study to the fields of dyslexia and coping can be found in the following concluding chapter.
CHAPTER 7: CONCLUSIONS

The previous chapter discussed the key findings of the study responding to the research questions. This chapter draws together the findings of the study and specifies the unique contributions to the field of dyslexia. Moreover, it examines the limitations of the study and makes suggestions for future research. Prior though to proceeding with these issues, a brief summary of the findings will be given in association with the intentions of the study.

a. Summary of findings

To start with, as it was mentioned in the introductory chapter, although dyslexia has been an area of increased interest, research has mainly focused on causation and remediation neglecting the human side of dyslexia (Burden, 2005) and the personal perspectives of dyslexics (Burden and Burdett, 2007). The limited research projects that acknowledged the importance of personal aspects of dyslexia have mainly focused on emotional effects and implications at self level (e.g. self-concept and self-esteem). Little comprehensive research has been conducted on the human experience of coping with dyslexia. Therefore, this study explored the phenomenon of coping with dyslexia holistically and in-depth, giving priority to the uniqueness of the case and the voice of the dyslexic participants, and without making any presumptions about the nature or the appraisals of dyslexia or the ways of coping.

The study began with a thorough review of the existing literature, consideration of its epistemological and ethical assumptions, a careful planning of the methodological practicalities, a detailed data analysis and a discussion of the findings as responses to the research questions. Using semi-structured interviews and inductive analysis in the context of a multiple case-study methodological design, the study managed to gain holistic and thorough understanding of the phenomenon of coping with dyslexia based on the lived experiences and the unique meanings that participants attributed to their personal situations.
To summarise the findings, the study suggested that contrary to common perceptions in the case of the six adult dyslexic participants dyslexia was more than a sum of difficulties. Dyslexia involved ‘positive’ characteristics and in certain cases it was even appraised as a strength or gain. More interestingly, the dyslexia situation was not restricted to a set of symptoms. Rather, the nature of dyslexia in dynamic interaction with environmental demands and attitudes as well as the situational dimensions tended to create a series of implications for dyslexic individuals. All these factors in unison created the complex entity of the dyslexia situation, which was unique for each individual and differentiated as time passed. Therefore, dyslexic individuals were called to cope with a much more complex issue than a set of difficulties.

This is perhaps why a multiplicity of different types of coping strategies was reported by the participants in response to the daily demands. Besides the ‘expected’ activities, coping strategies involved ‘unconventional’ activities (e.g. writing in Greeklish, using the automatic spellcheck or avoiding literacy tasks) which due to the factors of individuality and unpredictability they actually contributed to coping. Most importantly, coping strategies acted in cooperation and they were perceived as a ‘whole’, suggesting that they operate as a system. The system evolved dynamically not only because of interaction between different activities but also because of influences from other factors such as circumstances, context, personal conditions and time in terms of epochs/decades (e.g. different epochs/decades are characterised by different understandings, resources and literacy demands) and life-stages (e.g. different life-stages come with different environmental expectations and support and different levels of personal maturity and control). This finding suggests that it would be a mistake to perceive the coping strategies system synonymously to the notion of coping.

Rather, coping is a much more complex entity that besides coping strategies involves factors such as the self, environmental support, the dyslexia situation and the in-between those interactions. The findings suggested that each of these factors seems to play a unique role in the process of coping. The self factor involved the ‘personal baggage’ and stressed the importance of individuality (e.g. personality, personal preferences and inclinations and personal levels of maturity, autonomy and control) in coping with dyslexia. Environmental support also emerged as a crucial factor. A multiplicity of different types of support (including traditionally ‘disengaging’ activities) from different sources and in different degrees of intensity was reported as
contributing to coping. Similarly to coping strategies, different environmental sources seemed to interact dynamically creating an emergent and always evolving ‘micro-system’ of support which was more than a simple sum of its parts. The term ‘micro-system’ has been used on the basis of being a micrography (see p.268) and embedded element of the system of coping.

The conceptualisation of the phenomenon of coping with dyslexia as a system of dynamically interconnected factors seems to be a promising perspective because it tends to conceive of the operation of the phenomenon holistically and in fuller detail and complexity. Such a perspective suggests that coping with dyslexia is transactional because of the dynamic, reciprocal interactions and changes as an integral part of the phenomenon. Both the nature of the system and the nature of the involved factors differentiate as a result of the communications between them and as a function of developments in factors due to time (e.g. self gradually changes due to growing up and different levels of maturity variably influence the process of coping).

The exposure of coping to multiple interactive factors (e.g. self, environmental sources, time and context) that operate in different coping modes seem to make effectiveness a relative issue, which explains why certain coping strategies or interventions do not work. Although it might sound ambiguous, the strength of the transactional perspective lies in its suggestions about uncertainty and unpredictability. Contrary to traditional dyslexia models, transactional approaches do not recommend stand-alone methods as ‘magic recipes’; rather, they encourage the employment of various activities in line with complexity theory’s tenet of a multi-perspective ‘attack’. Such an approach aims to problematise the process of coping and seems more likely to equip individuals with the most appropriate techniques for their idiosyncrasy. Moreover, it does not exclude the possibility of different types and models of coping being effective simultaneously or in conjunction. And this is perhaps the most important advantage that a transactional approach can bring to the field of dyslexia. Coping with dyslexia is too complex to be seen as ‘either-or’. Rather a multi-method, multi-perspective approach is required. After all, in life course it is unlikely - almost impossible - that coping would lie within a single model.

Hence, in line with transactional approaches the transitional 4 S system seems to be a promising analytic tool for understanding, problematising and planning action for
coping with dyslexia. Findings suggested that in the case of the six adult participants the 4 S system adequately identified the key factors for coping and efficiently conceived their operation as a system of mutually interacting factors, stressing the notions of individuality, unpredictability and interconnectedness of different perspectives and models. Therefore, the present study puts forward that the employment of the 4 S system can be a valuable tool for the dyslexia discipline.

**b. Unique contribution**

The implications of the findings for theory and practice were explicitly discussed in the previous chapter. This section refers to the unique contributions made by the study to the disciplines of dyslexia and coping.

To start with, this is the first research project in the field that explores dyslexia within a transactional approach and suggests that transactional approaches can indeed theorise and explain efficiently the phenomenon of coping with dyslexia (as the cases of the six participants suggested). As mentioned in the literature review, the dyslexia discipline has been dominated by reductionist and interactionist approaches which, whether focusing on self or environment or both, understand coping as a response to dyslexia stressors. In such understandings benign or positive appraisals do not demand coping (Anshel and Delany, 2001). Contrary to other research in the field, the transactional approach and the ethical stance adopted by the study leads to a non-pathologising perspective that does not presuppose that dyslexia is a ‘problem’ demanding fixing and that dyslexics are by default ‘stressed’ and ‘depressed’; rather, dyslexia is seen as a ‘situation’ happening in ones’ life and it is not a problem, a barrier, a disadvantage, an advantage, a strength or a gift until it is defined as such by those experiencing it. Starting from a non-disabling standpoint has made a significant contribution to the field. Not only has it managed to enrich the field with a new perspective by integrating the exploration of coping with more general efforts related to aspect of dyslexia that are not inconvenient; it has also allowed the exploration of cases of successful and happy adult dyslexics, for some of whom dyslexia was not even an issue. This does not neglect that such individuals may still put forth effort to cope with their ‘remediated’ dyslexia or that in certain periods in their lives they have felt stress, discouragement or frustration. However, it does not portray the association of such feelings about dyslexia as
obligatory across the lifespan. This finding stands against the predominant assumptions in the dyslexia discipline and recommends that adopting a non-pathologising perspective seems to be beneficial for the field both ethically and methodologically.

Besides this non-pathologising aspect, the adoption of a transactional perspective provides an innovative approach with regards to the operation of coping. From a transactional point of view, reductionist and interactionist approaches are regarded as static and limited because they fail to conceive of coping holistically, as a system that involves bidirectional and multilevel interactions between multiple factors that do not remain independent. The exploration and the explanation of the phenomenon of coping with dyslexia as a system which is more than the sum of its parts, has never been attempted in dyslexia literature before. The study suggests that transactional perspective is beneficial for the field because it is realistic and holistic, conceiving the phenomenon in fuller detail and complexity. As it was mentioned above, a major strength of the transactional approach is that in opposition to polarised models, it does not exclude the possibility of the concurrent (efficient) operation and cooperation of different coping perspectives.

Furthermore, the study is the only known research that has explored the transitional 4 S system in association with dyslexia, making a unique contribution to the disciplines of coping and dyslexia. Not only has it explored and extended the potential of the 4 S system which was originally designed for counseling, but also suggests that the dyslexia discipline can benefit from its utilisation. The findings suggest that the 4 S system tends to be an efficient analytic tool for exploring and problematising coping with dyslexia. Moreover, in line with transactional and complexity theory understandings, the 4 S system suggests a methodology for coping which has not been described in the literature before. ‘Attacking’ difficulties from multiple perspectives seems to be a promising approach and it is more likely to contribute to coping (Mason, 2008) due to the acknowledged role of individuality and unpredictability. It suggests that there is not a universally best-way of coping and that traditionally ‘disengaging’ activities can indeed be ‘efficient’ for certain individuals within certain circumstances.

Moreover, the study provided a common taxonomy for the different types of support and the different types of coping strategies. Contrary to most research projects that were concerned solely with coping strategies and mainly at a descriptive level, this study
explored both support and coping strategies and coded them at an abstract, interpretive level taking under consideration the content of the activities as well as the intentions of the user. Moreover, although the classification may resemble preexisting microanalytic taxonomies (e.g. Endler and Parker, 1990; 1994) in framework due to the review of the relevant literature, it can be suggested to be ‘original’ to some extent, not only because it is conceptualised within transactional understandings but also because based on an inductive analysis in which ‘new’ types were suggested, enriching the existing literature. For instance, avoidance, survival, emotional and deconstructive cognitive coping strategies as well as moral, mainstream and survival support have never been acknowledged officially within the dyslexia discipline as contributing to coping. Similarly in the coping literature, situation-focused coping strategies have never been further specified in medical, mainstream, alternative and survival types. Therefore, the present study suggests that both theory and practice should take the additional types under consideration and problematise such coping activities challenging predominant assumptions; because although unconventional, such activities are likely to be beneficial for certain dyslexic individuals.

Finally, the present study is the first study in the field that explores the evolution of the system of coping in association with Kincade’s (1987) theory about individuals’ autonomy, suggesting that different life-stages are accompanied by different levels of independence and responsibility over coping and that environmental and self negotiations for coping control go through the phases of dependence, counterdependence, independence and interdependence. This finding not only contributes to the field that multiple factors are involved in coping but also stresses that coping with dyslexia is a process with phases demanding flexibility and not static, unidimensional responses.

c. Limitations of the study and recommendations for future research

Despite its unique contribution, the present research is still a small-scale study into a tiny aspect of the field. Although six participants constitute an adequate sample for a qualitative study that makes no claims for statistical generalisability, it is still a small
purposive sample, with specific characteristics. Therefore, it would be interesting if the research was repeated employing a sample of individuals of different nationalities, localities and cultural backgrounds. More specifically, it seems important to acknowledge that the different types of support and coping strategies, which were proposed by the study, are contextually defined and therefore, there are no assumptions that the same types would necessarily be met outside the Greek context. For example, it is likely that survival coping strategies such as cheating in school exams copying or buying ready-made notes are characteristics of the Greek educational system which according to the participants demanded word-for-word memorisation of the textbook, as the most efficient technique for successful attainment levels. Perhaps within a different educational system that prioritises critical thinking and dynamic and creative learning, such survival coping strategies would be of no use to dyslexic students. Hence, the exploration of the role of different nationalities and societal and cultural contexts in relation to the different types of support and coping strategies seems to be intriguing field for future research.

It would also be beneficial to incorporate a range of age groups into a future study. This study employed adults for the exploration of the phenomenon because they seemed more likely to provide a conscious, holistic view, reflecting on coping in different occasions, contexts, times and life-stages. Although this was true, adults unavoidably reflected on past experiences with regards to the educational system and schooling. Therefore, there is a chance that at the present time some things may have changed, especially concerning early school stages. A study with dyslexic students reflecting on their current experiences within school seems a promising research project.

The choice of relational sample could be considered as limiting in terms of age range. However, the lack of awareness and the extensive under-identification of dyslexia before the 1990s in Greece seem to make the attempts for recruiting an older age sample difficult or even unrealistic, regardless of the sampling method. The relational sample also seemed to have certain implications regarding the socioeconomic characteristics of the participants. Although, there seemed to be differences regarding the personal income and familial wealth, it appeared that all participants belonged to the same class as the researcher. Neither very poor nor very rich participants were involved in the study. This may be because dyslexia is considered a middle class situation (Portsmouth and Caswell, 1988), but also because all participants were linked to the researcher.
Therefore, there may be some socioeconomic implications regarding the use of a relational sample that a future research perhaps needs to consider.

Similarly, the choice of a relational sample maybe considered limiting in relation to locality. All the participants were from Athens, which happened to be the researcher’s hometown. Athens though, was not chosen on the basis of a simplistic convenience but because it is the largest urban area of the county and the region that demonstrates the highest percentage of official diagnoses of dyslexia (Drosinou, 2002). Therefore, Athens seemed to be the most possible context for locating individuals who fulfill the quintain criteria of the study, the official dyslexia diagnosis. However, it must be acknowledged that Athens tends to be the most organised context of the country in terms of diagnosis and intervention and, thus, the allocation of support resources and facilities may be greater in comparison to other provincial regions. This seems to have certain implications regarding the types and the systems of support and coping strategies and, so, a study with dyslexic individuals from different areas of the country seems to be an interesting research perspective.

Moreover, the study intentionally gave emphasis to the importance of dyslexic individuals’ perception of their situations, letting them speak for themselves instead of having others talk for them. However, a future research project could perhaps shed light on different aspects of the phenomenon, which dyslexic individuals might have ignored, by including the perspectives of other people involved in coping such as family members or teachers.

Furthermore, some people may pick up on the impact of the researcher in the analysis, arguing against the interactive engagement of the researcher in the processes of data collection and analysis. From their perspective, such research practices run the risk of data manipulation and colonisation. However, as mentioned in the methodology chapter, the idea of a detached, ‘objective’ researcher who uses non-directional unbiased methods as a ‘direct pipeline’ to the participants world seems to be facile. This is not only because people by default share social milieu knowledges and inescapably see the world through ‘biased’ culture’s eyes, but also because in-depth understanding of individuals’ experiences is possible only when the researcher shares their frame of experience (Crotty, 2007). Qualitative transactional approaches - especially these that involve interviewing - see research as a dynamic meaning-making process between knowing subjects that share the same interest in a phenomenon. Although the researcher
may strive to ‘bracket’ any preconceptions and have meaning as much a function of the participants’ reconstruction, it must be acknowledged that the meaning to a degree is a product of the interaction between the participants and the researcher. The present study considered the interaction between the researcher and the participants and the researcher’s impact on the research as inherent in the research process. Being reflexive and acknowledging the role of the researcher and its possible implications seems to be more honest approach than claiming ‘objective truth’ through ‘unprejudiced’ methods. This of course, does not imply that the researcher uncritically allows the imposition of personal beliefs on data. Rather the use of open-ended, semi-structured interviews and inductive analysis methods suggests that in this study priority was given to the participants’ voice. However, in line with the constructionist epistemological assumptions of the study, the researcher was not distinct from the research; rather mutual interactions between the researcher and the participants led to deeper understanding of the phenomenon of coping with dyslexia.

Additionally, this study explored the repertoire of different types of coping strategies in terms of presence but not in terms of frequency. Hence, a future work could focus on the rates of incidence of different coping strategies in different life-stages. Moreover, it would be interesting to further investigate whether the increase in the number of coping strategies in adulthood is a result of a transition from mechanistic externally-driven coping to a vast and flexible internalised repertoire due to maturity or whether memory and reflecting on the past as opposed to the present plays a role.

Finally, although private dyslexia institutes were appraised by participants as a source of major specialised help, their role and operation has so far been an unexplored field. Therefore, it is worth researching how these institutes support dyslexic individuals.

**d. Conclusion**

Reflecting on the study now that it has come to a close, I must say that it has been a long, complex, fascinating, absorbing but also sometimes painstaking process which involved problematisation, brainstorming, challenging my presumptions, engagement with concepts and theories as well as creative development of ideas. The experiences I have gained from this process are extremely valuable and I think it would have been beneficial if teachers, parents, practitioners, educationalists, academics and generally
people that come in contact and support dyslexic individuals could undergo a similar experience, because it has required me to reflect on how dyslexics ‘actually’ cope as opposed to how external agents think that they ‘should’ cope. Engagement with the present study made me realise that dyslexic individuals cannot be ‘sorted’ by unidimensional reading and writing treatments because dyslexia is more than a literacy issue. Phonics alone will not work - not for the social and emotional aspects of dyslexia - and in some cases they may not work at all - not even for literacy. Perhaps a flexible approach needs to be considered and environmental values and attitudes towards literacy, dyslexia and ‘orthodox’ treatment techniques need to be re-examined too. Finally, besides the consideration of a flexible mode of support, another major personal gain from this research is its finding that the educational process needs to be designed in relation and negotiation with dyslexic individuals, taking advantage of any personal strengths or preferences because these are likely to lead to the creation of a niche and the development of a happy and successful living. And this is the desire and the challenge: supporting dyslexic individuals to attain a healthy, happy and functional life, regardless of their levels of literacy efficiency or the employment of conventional or unconventional modes of coping.


Empirical, and Clinical Aspects, New York: Springer Science and Business Media, LLC.


In the independent report ‘Identifying and Teaching Children and Young People with Dyslexia and Literacy Difficulties’, Sir Jim Rose (2009, p.10) provided the following working definition of dyslexia and its characteristics:

- **Dyslexia is a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling.**

- **Characteristic features of dyslexia are difficulties in phonological awareness, verbal memory and verbal processing speed.**

- **Dyslexia occurs across the range of intellectual abilities.**

- **It is best thought of as a continuum, not a distinct category, and there are no clear cut-off points.**

- **Co-occurring difficulties may be seen in aspects of language, motor co-ordination, mental calculation, concentration and personal organisation, but these are not, by themselves, markers of dyslexia.**

- **A good indication of the severity and persistence of dyslexic difficulties can be gained by examining how the individual responds or has responded to well founded intervention.**
### Interview Protocol

#### APPENDIX 2

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<th>SELF:</th>
<th>SITUATION:</th>
<th>SUPPORT:</th>
<th>STRATEGIES:</th>
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<tbody>
<tr>
<td>Personal details:</td>
<td>Dyslexia? Statement? Diagnosis? When, who, why?</td>
<td>Sources: (family, friends, intimate relationships, institutions)</td>
<td>Avoidance?</td>
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<tr>
<td>4. Qualifications:</td>
<td></td>
<td></td>
<td>Alter perceptions about dyslexia?</td>
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<td>Psychological resources:</td>
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<tr>
<td>1. Personality (feelings, attitudes, confidence, self-esteem, control, flexibility)</td>
<td>2. Implications? Contexts? School University Work Home Leisure activities Other...</td>
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<tr>
<td>2. Values:</td>
<td>3. Timing: Social clock?</td>
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<td>3. Commitments, priorities:</td>
<td>4. Role charge?</td>
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<td>5. Duration?</td>
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<td></td>
<td>6. Assessment?</td>
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<td>How would you describe your dyslexia?</td>
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APPENDIX 3

Sample pages from Eugene’s interview: original Greek transcripts and their English translations with marked coding levels. Different colour pens correspond to different levels (yellow, blue and purple stand for first, second and third level of coding respectively).
I've had specialised lessons and I know what I have. Shall I tell you something? Even when I started these lessons, when I told my friends I have this they found it awkward because they saw me differently, and they didn't know (about dyslexia). But it never worried me.

T: I see. So, what do you think were the characteristics that your teacher saw?

E: She saw that I had problems with my writing, because I didn't write very well. I was easily confusing the numbers, I never managed to learn the alphabet and even nowadays I may quite often forget a letter. In those days we used to learn the alphabet and she saw a difficulty in me; but I wasn't so confused with numbers as I was with letters.

T: Can you talk a bit more about this?

E: Letter reversals. Also, I never learnt spelling. Even nowadays I still have spelling problems, but nowadays I try to see how somebody else writes and use my memory to remember to write the word in the same way. However, maths "pulled me" since then. I mean, I was among the best students. In the institute they told me that I cannot have problems in everything, there would be something I'm good at. They told me I might be good at maths, because I'm different from the rest. And so it did happen... and this is why I continued with maths.

T: What about reading?

E: Well. Even now I don't read fast, I mean, if I read to you something right now you'll see that I have a problem. I speak fluently because of my job but in reading I have a problem.

T: What kind of problem?

E: My pace is slow and I make mistakes. They told me a way to improve it—to read books or even the newspaper, but I don't like reading and this is why it didn't help. I mean, that in gymnasium and lyceum when the rest of the students lifted their hands to read a text or a page, I was among the last (students) to do so. And even if a teacher would ask me to do so I wouldn't do it.

T: Would you deny it?

E: Yes, I would deny it there was no chance I read.

T: Would you find an excuse?

E: Yes. It was the only thing I felt bad about.

Reading?

Yes, reading. In never felt bad about anything else; never. However, reading made me feel bad.
θ: Μερικά τύπω (αίτηση διαγνώσεως διαλέξεως) δεν είχες καταλάβει τώρα;

η: Αν δεν έχεις, δεν καταλαβαίνεις ότι έχεις συμπτώματα. Πιστεύεις ότι πάντα
84 όλα καλά και φαντάζεις ότι μας βοηθάτε να μάθετε στο διάβασμα, ειδικά
85 στο σπιτικό. Ηνω λέγω διάκοπτα, γιατί δεν μπορούσαμε να αποτρεπθούμε,
86 αλλά η μάνα πάντα ότι κάθε παιδί δεν θέλει το σχολείο, δεν θέλει το
87 διάβασμα, δεν θέλει κάθε και το άλλο... Δεν πιστεύεις ότι οι παιδιά
88 προβλήματα, καταλαβαίνει όμως η καθηγήτρια ότι δεν έχεις συστατικά, ότι δεν έκανες
89 σωστά το εντός που έλαβε ο λόγος που είναι ότι απλά πράγματα, αλλά ο
90 καθηγήτρια έχει καλύτερα που είναι το λάθος. Αποκαλύπτουμε ότι το
91 καταλαμάθη τη διαβόλα...

θ: Δήλω, εσύ μάλιστα τώρα δεν είχες υποψηφιάσει κάτι;

η: Όχι, δεν είχα υποψηφιάσει. Ήμουν ένα κλασικό παιδί που πίστευε η μάνα μου
92 ότι δεν θέλει το διάβασμα. Έχεις, δεν τρελαίνονταν και για το διάβασμα, αλλά
93 και τότε που έμαθα ότι η τρελαίνοντα. Εκεί και τότε που είμαι φοίτητης λάθος
94 πάλι πρέπει να διαβάζω. Δεν άντεχε άλλο, καταλαμάθης

θ: Ναι...

η: Η μάνα μου έλεγε ότι είναι ανθρώπινο, όταν το ίδιο έλεγε και στον αδερφό
98 μου τον Στέφανο.

θ: Ναι... Όπως εσύ μάλιστα τώρα έχεις τελείως αποφασίστες. Ληλαθεί, πώς
100 συνέβησ; Μια μέρα σε πίσω και σο σάλες ότι θα σε πάνε στο κέντρο;

η: Ναι, Μου είπες ότι μάλιστα μου ότι είδες η διαφάνεια σου ποις ήταν κάποιο
101 προβλήματα και θα πρέπει να πάμε να δούμε αν έχεις αυτό το πρόβλημα. Όσα
102 όμως η μάνα μου έγινε τε ακριβώς ήταν. Φαντάζεσαι ότι ακόμα και η διαφάνεια
103 μου δεν ήξερα ακριβώς τι ήταν, αλλά είχες ακούσει κάτι κι έτσι το βρήκα
104 Επειδή λοιπόν να πάμε εκεί, να δούμε καταρχήν αν έχει προβλήμα, δεύτερον
105 να δούμε και μα την ιδιοκρατία μας δεν ζήλευς. Με είκα στον στόχο. Μάθαμε ότι δεν γίνεται να το
106 διαφάνεισμα, αλλά μπορείς να διαφάνεις μερικά πράγματα. Και πιστεύω ότι
111 με βοηθήσαν πολύ για να καταλάβω δεί προγραμμάτισ.

θ: Η διαφορά επίσης σου, ώστε σε σχέση με τους συμπερασματές σου δεν σε
113 είχες προβληματιστεί ποτέ;

η: Ναι συν από κάτι δεν έχω κάτι. Δεν έχω κάτι από της μητέρας. Αλλά έχω κάτι
114 καθώς έχω γεννηθεί στην μέση. Έχω ένα κόκλο, έχω κόκλο και αυτό έκανε
115 και η μάνα μοι. Ληλαθεί ακόμα και σε δύο δηλώσεις καταστάσεις ήδη πάμε, έναν
116 κινδύνο να θα ζήλεψε και τι είδε αλλά μερικά πράγματα. Όταν δεν έξαρα κάτι, δεν
118 έγινε ότι είδας άρωσες. Ούτε έχεις ένας ακριβώς. Δεν έχεις αυτό τον άρωση. Αυτό μπορείς να το
119 υποψηφιάσεις από κάτι που και ήταν και σε μαμά μας. Όπως είδας, έχου
120 σε τούλι μηκία, δεν ήταν στο επί του άλλου, δεν το
121 καταλαμάθησε. Πώς δεν σας αρέσει να διαβάζεσ, σας πρέπει να
122 παίρνεις την μαμά και να πάετε. Ακόμα και τόσες και φορές μπορείς, έχου
123 παράλληλα έχει κάνει μαθήματα, που έξαρε τι ήξερε κάτι. Κοίτα, να σου πω κάτι;
Ακούμα και τότε, όταν άρχισε τα μαθήματα και έλαβε στοιχεία, μονο για να συνεχίσει και κάποιος μονο για να συνεχίσει και κάποιος μονο για να συνεχίσει και κάποιος μονο για να συνεχίσει.

Ενώ, τότε δεν έμεινε πιο ίσως

Θ: Μάλαστα. Οπότε: Η διακοπή σει σει την περιπτώσεις νουνίες; Ενώ

Η: Είναι δεν ωρίμαι σει σει πρόβλημα με την προσωπική μου. Μαίνονται, και δεν βλέπω πρόβλημα με την προσωπική μου.

Μετά, και πρόβλημα σαν η προσωπική μου. Μαίνονται, και δεν βλέπω πρόβλημα με την προσωπική μου.

Θ: Η ανάγκη; Επομένως, δεν ωρίμαι σει σει πρόβλημα.

Η: Αναγκαίομαι. Επομένως, δεν ωρίμαι σει σει πρόβλημα. Επομένως, δεν ωρίμαι σει σει πρόβλημα. Επομένως, δεν ωρίμαι σει σει πρόβλημα.
Second level codes: reorganization of first level codes under broader second level codes based on Eugene’s interview.

Personal characteristics
Peers and friends
a) An example of second level codes file based on Eugene’s interview. Totally six files - one for each participant - were created.
b) The six files that contain second level codes and their subsumed first level codes. Each file corresponds to a participant.
a) Axial coding within second level of analysis: Different highlighter pens refer to different life-stages (yellow = childhood, purple = adolescence, pink = adulthood), circled words define the field of coping (e.g. spelling, reading) and types (e.g. alternative coping strategy, avoidance coping strategy etc.) are marked above each coping strategy with black pen.
Second level concept maps illustrate the relationships between the second level codes and their subcategories. Examples include both original maps in Greek and their English translations.
FAMILY /
PARENTS

- **immediate action**: they seek professional support
- lack of knowledge; they think that difficulties are normal
- mother: she helps both kids with school homework
- "pressure" for standing
- it shows interest
- good/harmonious family; stability
- non-pathologizing at the family boundary
- perception of dyslexia: they have forgotten about it
- they have both of their children tested
- they provide financial support: pay for the classes; tuition fees
- professional support: both kids work at the family business
- they choose private lessons for their languages for the kids
DYSLEXIA INSTITUTE

- 3 times per week
- 1:30 pm per time
- 2 years of support

DIAGNOSIS

EXPLANATION
- dyslexia isn't a problem
- there's no cure
- it's not a sign of weakness, there's a strong person too (mate)
- brain activity
- personal situation

LEARNING SUPPORT (methods)
- multiple tasks
- read books —- improve reading
- paint/drawing
- spelling tasks
- support for memory

PSYCHOLOGICAL SUPPORT
- they reinforce them
- non-pathologising view
- good personal relationship with teacher
- reassurance/security

TREATMENT

TESTING
as a child:
- lack of awareness about dyslexia
  - lack of understanding
  - no specific diagnosis
- lack of diagnosis - lack of understanding
- no attainment differences with peers due to low school expectations
- middle ability student - worry
- gradual understanding - personal maturity / aging

improvement:
- after 2 years at the institute
  - improvement in oral expression
  - improvement in spelling
- constant exercise - improvement
  - lack of exercise - deterioration
- he still has some issues that demand improvement

Coping
- different coping strategies among dyslexics
- many factors play a role:
  - self-awareness
  - evaluation of the environment
  - will for improvement
  - severity of dyslexia
- early diagnosis
- perception of personal effort
- revolution of capital

leading: as a personal disposition

Career / Studies:
- personal file as a priority
- dual track play role in attending a regular school

University:
- good relationship with professor
- good attainment levels
- he also did well in exams
  - because of the practical nature of the subject

The role of phonological perception of languages:
- Greek is French / English
APPENDIX 8

Example of a third level concept maps regarding a participant’s coping strategies in different life-stages.

a) Eugene
Adolescence

- Heating sheets (I.339-41) SURV
- Truancy (I.440) SURV
- Destruction in class (I.641) SURV
- Peers' help for lesson notes (I.335-7) and exams (I.332-4) SURV

- He quit studying whatsoever (I.484) AVOID
- He postponed studying (I.384-8) AVOID
- He quit exams preparation (I.426-7) AVOID
- He even quit cheat-sheets at some point (I.402-7) AVOID
- Avoidance of school books (I.681) AVOID
- He disobeyed teacher to avoid school tasks (I.293-7) AVOID

- Hard work in specific lessons (I.347-8) MAIN
- Participation in task of his preference (I.302-3) MAIN

- Signposting and schemas (I.467-8) ALT

- Neglects demands (I.402-404) EM/COG
- Efforts to reduce stress (I.267-8) EM/COG
- Compromises (I.240) EM/COG
- Disinterest in school (I.414-21) EM/COG
- Aggressive behavior towards teachers (I.293-7) EM/COG
- Destruction in class (I.641) EM/COG
- Deconstruction of school success and school knowledge (I.201-202) EM/COG (CH)
APPENDIX 9

Examples of third level case-oriented chronological matrices regarding participants’ coping strategies in different life-stages:

9a) EUGENE

<table>
<thead>
<tr>
<th>Life-stage/Coping strategies</th>
<th>Social status</th>
<th>Emotional status</th>
<th>Goals</th>
<th>Writing/spelling</th>
<th>Reading</th>
<th>Dyslexia situation</th>
<th>School/university</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childhood</td>
<td>1ALT</td>
<td>1MAIN</td>
<td>1ALT</td>
<td>1MED</td>
<td>1MED</td>
<td>1ALT</td>
<td>1ALT</td>
</tr>
<tr>
<td>Adolescence</td>
<td>2ALT</td>
<td>2MAIN</td>
<td>2ALT</td>
<td>2MED</td>
<td>2MED</td>
<td>2ALT</td>
<td>2ALT</td>
</tr>
<tr>
<td>Adulthood</td>
<td>4ALT</td>
<td>4MAIN</td>
<td>4ALT</td>
<td>4MED</td>
<td>4MED</td>
<td>4ALT</td>
<td>4ALT</td>
</tr>
<tr>
<td>Medical coping strategies</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
</tr>
<tr>
<td>ALT= Alternative coping strategies</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
</tr>
<tr>
<td>Avoidance coping strategies</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
<td>COG (EM)</td>
</tr>
<tr>
<td>Life-stages/Coping strategies for:</td>
<td>Dyslexia</td>
<td>Writing</td>
<td>Reading</td>
<td>Attention</td>
<td>Memory</td>
<td>Oral expression</td>
<td>School/university</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------</td>
<td>---------</td>
<td>---------</td>
<td>-----------</td>
<td>--------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Childhood</td>
<td>-</td>
<td>1AVOID</td>
<td>1AVOID</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1SURV 2MAIN 1AVOID</td>
</tr>
<tr>
<td>Adolescence</td>
<td>4MED 2AVOID</td>
<td>2MED 1SURV 1MAIN</td>
<td>5MAIN 3AVOID 3ALT 2EM/COG 2MED</td>
<td>1ALT</td>
<td>2ALT</td>
<td>1MED</td>
<td>4MAIN 5SURV 6AVOID 1ALT 1MED</td>
</tr>
<tr>
<td>Adulthood</td>
<td>3AVOID 2EM/COG(1CH) 1SURV</td>
<td>1MAIN</td>
<td>2AVOID 4ALT 1MAIN 1EM/COG(1CH)</td>
<td>1LT</td>
<td>4ALT 2SURV 1AVOID</td>
<td>-</td>
<td>1SURV 4AVOID</td>
</tr>
</tbody>
</table>

MED = Medical coping strategies, MAIN = Mainstream coping strategies, AV = Avoidance coping strategies, ALT = Alternative coping strategies S = Survival coping strategies COG/EM = Cognitive/emotional coping strategies
Examples of third level case-oriented concept maps regarding the major themes and the relationships between them and their subcategories:
APPENDIX 11

The table represents the environmental sources of support involved in the process of coping with dyslexia as mentioned by participants individually.

<table>
<thead>
<tr>
<th></th>
<th>Hannah</th>
<th>Dianna</th>
<th>Nestor</th>
<th>Andrew</th>
<th>Stelios</th>
<th>Eugene</th>
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</thead>
<tbody>
<tr>
<td>Family</td>
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<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
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<tr>
<td>School</td>
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<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Friends</td>
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<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Peers</td>
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<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Dyslexia institution</td>
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<td>√</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Educational system</td>
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<td>√</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Diagnostic system</td>
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<td></td>
<td></td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Psychologist</td>
<td></td>
<td>√</td>
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<td></td>
<td></td>
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<tr>
<td>Work</td>
<td></td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Society</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Circumstances</td>
<td></td>
<td>√</td>
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<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Private tuition</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>
APPENDIX 12

Detailed analysis of the evolution of the system of support in Stelios’s case:

a. Childhood

To start with, during childhood Stelios received support from a variety of environmental sources but mostly from his family and the dyslexia institute. His parents -who had been familiar with the dyslexia world due to his older brother- offered immediate medical support in terms of early diagnosis and specialised learning support. Although it was the dyslexia institute that actually made the diagnosis and the intervention, none of this would have taken place without the parental initiative and their financial support for his tuition at the dyslexia institute. Moreover, parents seem to provide mainstream and survival support dedicating many hours daily to help him with homework till he was 13 years old. “My parents helped very much till the 1st grade of gymnasium… Imagine a person studying with you six hours per day and being there helping you out” (l.701-707). Needless to mention that parents provided unofficial psychological support (e.g. emotional closeness and security) by providing information over dyslexia to their kids and adopting a non-pathologising attitude. For example Stelios mentioned: “I didn’t find it awkward because it was something I’ve heard about before and so it didn’t surprise me” (l.59-60).

As it was mentioned above, the dyslexia institute offered medical support in terms of testing, official diagnosis, statement, explanations about dyslexia but mostly specialised learning support on dyslexia for almost two years. Specialised treatment involved the use of special “notebooks with lines …and tracks” (l.208-209) for fine movements and handwriting, the use of cards with letters and syllables to improve reading and writing. “Cards such as “τ+α=τα”, cards for words such as “μού+τσος= μούτσος” and so on. They asked me to write sentences, read texts and such things in general” said Stelios (l.577-579). Moreover the institute provided practical-survival tips for school lessons and unofficial psychological support with the establishment of a friendly, non-strict environment that permits to the student to make mistakes as part of the learning process. “They didn’t mind if you made a mistake; they wouldn’t correct you immediately -as it happens at school- but they’ll let you finish first and then tell you you’re mistaken… they were more relaxed” (l.735-739).

Peers and friends seemed to play secondary role during childhood. Class is seen as “a close community” (l.255) that sets psychological pressure. “I believe that 99,9 per cent of dyslexia is created by the class(l.597-599).… a feeling of embarrassment is created (l.603)” said Stelios in relation to the social and psychological implications of peers. Although classmates tended to operate within a moral mode of support, Stelios suggested generally having good relationships with classmates and receiving emotional and survival support by a close friend: “I had a friend who gave me all school work” (l.715). During this period school and educational system seem to be “absent” from the support system and so it can be claimed that they operated within a moral mode of support.

b. Early adolescence
In Stelios’s case parental support during early adolescence (gymnasium school period) seemed to be reduced. After Stelios’s initiative parents stopped providing survival support for school and mainstream support for learning. “In 2nd grade of gymnasium -although they worried a lot- they let me study on my own because they knew I didn’t like studying with their supervision” said Stelios (l.704-705). However, family continued being a significant source of financial and psychological support. At the same period, the dyslexia institute shut down and from that time and on Stelios did not receive any further learning support on dyslexia. “The dyslexia institute shut down... and at that time there were no other institutes close by” (l.100-102). Although the perception of class as source of moral psychological pressure did not change, the role of peers seemed to increase as a source of practical/survival support at school exams. Circumstances were mentioned by Stelios as an emergent source of social and psychological support. “In primary school and gymnasium, things are much harder, especially if there is no other person with dyslexia (in class)” said Stelios (l.607-608). The educational system emerged as a system of alternative support providing oral school exams. However, since support was restricted to oral exams, the educational system seemed to still operate within a moral model of support. Similarly, school seems to have established a moral support mode because it was mentioned as an extremely strict and unfriendly environment which focused solely on weaknesses and made the student with dyslexia feel uncomfortable. More specifically Stelios claimed that “in school teachers would definitely stopped you” (l.743) in case there was a mistake which “would make you stuck, and if you stack, there was no way you start over again” (l.740-741).

c. Late adolescence

According to Stelios during late adolescence -lyceum period- his family kept on being a factor of psychological stability and survival financial support (e.g. parents paid private lessons at home for final exams) but also a source of social support since a friendship was developed between Stelios and his older brother. Circumstances also seemed to play important role in terms of unofficial psychological and social support. After leaving mainstream schooling to attend technical lyceum, Stelios was -out of the blue- proclaimed the 2nd best student in his class. “I went to new school and as soon as I entered it I become the second best student, out of the blue! How can I explain it? And the following years I cannot recall studying at all” (l.414-420). Therefore, circumstances changed his role within class enhancing his self-esteem but on the other hand urged him to quit studying completely. Moreover, Stelios appreciates the role of luck as a source of emotional and survival support because he happened to have teachers that were informed about dyslexia and showed understanding. Still, school teachers could not provide any learning support due to lack of specialised teaching expertise on dyslexia. The educational system provided the same alternative support based on oral exams which seemed to work well with school exams because “when someone takes exams orally he/she has a special treatment; he/she stands out from the crowd” (l.317-319). Stelios though claimed that oral support did not work for final/national exams, because it is hard to explain orally math reasoning. However, the main attitude in the educational system seemed to lie within moral understandings. For example, exam regulations set by the department of education demanded from candidates with dyslexia to move from their original schools to different, unknown, segregating settings so as to sit for oral exams with other dyslexic students. The lack of the educational system’s support seemed to be covered by private tuition. In fact, according to Stelios in this life-stage mainstream educational support stemmed mainly from private lessons at home, which also took the form of survival support for the final exams. “Before sitting for the National exams I received private lessons from a professor who taught a famous school (l.561-
… I paid a lot again.. (l.565)” said Stelios. The role of such lesson was to prepare Stelios for the exams by making him learn how the specific examination operates. In this sense, it was more about learning the underlying “logic” and surviving with the tests expectations rather than gaining any knowledge. Finally peers seemed to serve the same function as in the previous life-stage.

d. Adulthood

According to data analysis during adulthood environmental support seems to be reduced. The role of Stelios’s family was restricted to unofficial psychological and survival professional/financial support - he worked at the family business. Circumstances though were perceived by Stelios as a major source of alternative support because environmental demands changed in adulthood and his reality did not involve literacy extensively. More specifically Stelios said: “..you pass into another level and it (literacy) isn’t part of your daily life (l.1028-1029)”. Technology was also reported as a source of practical/survival support for Stelios (e.g. use pc programmes with automatic spellchecking and use of greeklish as an alternative and “spelling-free” writing system for unofficial communication). Inevitably the new circumstances made Stelios feel more relaxed, providing -unintentionally- emotional support.

Moreover, the university seems to operate within a moral support mode because as Stelios suggested the examination system is unreliable and requests for re-evaluation of exams are almost a “forbidden” action due to the involvement of political parties. “A professor, who’s a friend, told me to avoid re-evaluation because I will need to get involved with political parties, accomplish their orders, fill-in papers.. find the ‘appropriate’ person, bribe people” said Stelios (l.906-909). Moreover, the dyslexia statement does not guarantee automatic system modifications (e.g. oral exams). On the other hand, University provides alternative support by setting different demands on students. For example, “whilst (in school) they asked to do reading, now they ask blind typing. I’m good at blind typing and so I don’t have a problem” (l.1033-1034). Finally, university seems to provide unofficial emotional support through friendly and non-strict staff members.

Peers at university also provide and psycho-social support in terms of fellowship (e.g. cooperation in tasks/exams) but also alternative support (e.g. changing the means of learning from written system to oral system). For instance, Stelios reported in relation to exam preparation: “I had my best friend next to me, reading to me the text; otherwise I wouldn’t be able to sit for the exams” (l.840-841).

Finally, there also seemed to be a gap in the internal procedures of the educational system across different educational stages. In fact, the official dyslexia statement did not pass automatically from one educational level to the other, but needed to be resubmitted by the student, who usually was the one who announces to teachers that he/she is dyslexic.
<table>
<thead>
<tr>
<th>APPENDIX 13</th>
<th>Fourth level cross-case, time-oriented meta-matrix regarding the repertoire of participants coping strategies. Latin numbers refer to different coping strategies, not frequency. Acronyms have the following meaning: MED = Medical coping strategies, MAIN = Mainstream coping strategies, AVOID = Avoidance coping strategies, ALT = Alternative coping strategies, SURV = Survival coping strategies, EM/COG(CH) = Emotional/Cognitive coping strategies (Coping strategies that attempt to change the meaning notion.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Andrew</strong></td>
<td><strong>Childhood</strong></td>
</tr>
<tr>
<td></td>
<td>4MAIN</td>
</tr>
<tr>
<td></td>
<td>3SURV</td>
</tr>
<tr>
<td>2. Hannah</td>
<td>9MED</td>
</tr>
<tr>
<td></td>
<td>24 cop. strat.</td>
</tr>
<tr>
<td>3. Dianna</td>
<td>4AVOID</td>
</tr>
<tr>
<td></td>
<td>9MED</td>
</tr>
<tr>
<td></td>
<td>4MAIN</td>
</tr>
<tr>
<td>4. Stelios</td>
<td>9MED</td>
</tr>
<tr>
<td></td>
<td>4EM/COG</td>
</tr>
<tr>
<td></td>
<td>2AVOID</td>
</tr>
<tr>
<td></td>
<td>1SURV</td>
</tr>
<tr>
<td>5. Eugene</td>
<td>7MED</td>
</tr>
<tr>
<td></td>
<td>5ALTM</td>
</tr>
<tr>
<td></td>
<td>3MAIN</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8SURV</td>
</tr>
<tr>
<td></td>
<td>25AVOID</td>
</tr>
<tr>
<td></td>
<td>Reading</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------</td>
</tr>
</tbody>
</table>
Fourth level meta-concept map developed by the comparison of case-oriented concept maps 15b, 15c, 15d, 15e, 15f and 15g:
15c: CONCEPT MAP REGARDING DIANNA’S SITUATION
15d: CONCEPT MAP REGARDING EUGENE’S SITUATION
15e: CONCEPT MAP REGARDING HANNAH’S SITUATION
CONCEPT MAP REGARDING NESTOR’S SITUATION

CIRCUMSTANCES
- Personal
- Background
- Assessment:
  - Profile
  - Perceptions
- Problem
  - Role change
  - Concerns
- Insecurity
- Anxiety
- Support
- Personal
- Potential
- School
  - Year

SITUATION
- Family
  - Issues
  - Concerns
  - Adjustment
- Teaching
  - Difficult
- Attention
  - Distraction

CHARACTERISTICS
- Memory
- Issues
- Struggle
- Practical
- Thinking
- Implications
- Social
  - Relationships
- Reaction

LATE DIAGNOSIS
- Implication
- Medical
- Support
- Practical
- Student
  - Difficulties
  - Learning
  - Environment
  - Emotional
  - Reactivity

ENVIRONMENTAL REACTIONS
- Support
  - Emotional
  - Practical
  - Medical
  - Student
  - Environment
  - Emotional
  - Reactivity

TEACHING
- Difficult
- Attention
- Distraction
- Struggle
- Practical
- Thinking
- Implications
- Social
  - Relationships
- Reaction

MEMORY ISSUES:
- Struggle
- Teaching
- Difficult
- Attention
- Distraction
- Struggle
- Practical
- Thinking
- Implications
- Social
  - Relationships
- Reaction

LATE DIAGNOSIS
- Implication
- Medical
- Support
- Practical
- Student
  - Difficulties
  - Learning
  - Environment
  - Emotional
  - Reactivity

ENVIRONMENTAL REACTIONS
- Support
  - Emotional
  - Practical
  - Medical
  - Student
  - Environment
  - Emotional
  - Reactivity

TEACHING
- Difficult
- Attention
- Distraction
- Struggle
- Practical
- Thinking
- Implications
- Social
  - Relationships
- Reaction
15g: CONCEPT MAP REGARDING STELIOS’S SITUATION
APPENDIX 16

A detailed table regarding Stelios’s coping strategies system in different life-stages:

<table>
<thead>
<tr>
<th>Life Stage</th>
<th>MED</th>
<th>MAIN</th>
<th>AVOID</th>
<th>ALT</th>
<th>SURV</th>
<th>EM/COG(CH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childhood</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adolescence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Latin numbers refer to different coping strategies, not frequency. Acronyms have the following meaning: MED= Medical coping strategies, MAIN= Mainstream coping strategies, AVOID= Avoidance coping strategies, ALT= Alternative coping strategies, SURV= Survival coping strategies, EM/COG(CH)= Emotional/Cognitive coping strategies (Coping strategies that attempt to change the meaning notion.)
Hannah’s repertoire of coping strategies in different life stages:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Dyslexia</th>
<th>Writing</th>
<th>Reading</th>
<th>Attention</th>
<th>Memory</th>
<th>Oral expression</th>
<th>School/ University</th>
<th>Goals</th>
<th>Social status</th>
<th>Emotional wellbeing</th>
<th>Leisure time</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childhood</td>
<td>2MED</td>
<td>1AVOID</td>
<td>1MED</td>
<td>1MED</td>
<td>1MED</td>
<td>1ALT oral</td>
<td>2MED (special</td>
<td>1SURV</td>
<td>(friendships</td>
<td>2EM/COG</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(read with stable pace)</td>
<td>(avoidance of writing tasks)</td>
<td>(specialised methods)</td>
<td>(reading with stable pace)</td>
<td>(memory cards)</td>
<td>(oral memoryisation)</td>
<td>support for reading and writing school tasks)</td>
<td>(ask for help)</td>
<td>out of school)</td>
<td>(Withdrawal)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2MED</td>
<td>2ALT</td>
<td>15SURV</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1EM/COG</td>
<td>(withdrawal)</td>
<td>1EM/COG</td>
<td>-</td>
<td>1EM/COG</td>
</tr>
<tr>
<td></td>
<td>(pick books with pictures, ‘read’ pictures)</td>
<td>(pick books with pictures, ‘read’ pictures)</td>
<td>(ask for help)</td>
<td>-</td>
<td>-</td>
<td>1SURV (ask for help)</td>
<td>1SURV (friendships out of school)</td>
<td>(withdrawal)</td>
<td>1EM/COG</td>
<td>(Withdrawal)</td>
<td>-</td>
<td>1EM/COG</td>
</tr>
<tr>
<td></td>
<td>1ALT</td>
<td>15SURV</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1SURV (ask for help)</td>
<td>1EM/COG</td>
<td>(Withdrawal)</td>
<td>1EM/COG</td>
<td>-</td>
<td>1EM/COG</td>
</tr>
<tr>
<td></td>
<td>(quit specialised work)</td>
<td>(ask for help)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1SURV (ask for help)</td>
<td>1SURV (friendships out of school)</td>
<td>(withdrawal)</td>
<td>1EM/COG</td>
<td>(Withdrawal)</td>
<td>-</td>
<td>1EM/COG</td>
</tr>
<tr>
<td>Adolescence</td>
<td>1EM/COG</td>
<td>2ALT</td>
<td>1AVOID</td>
<td>1AVOID</td>
<td>1ALT</td>
<td>1AVOID</td>
<td>5AVOID avoidance of reading, destruction activities, no participation in class, no studying, truancy</td>
<td>2EM/COG</td>
<td>(withdrawal, acceptance)</td>
<td>1SURV (friendships out of the school context)</td>
<td>-</td>
<td>2EM/COG</td>
</tr>
<tr>
<td></td>
<td>(boredness)</td>
<td>(symbolic writing, pictures)</td>
<td>(avoidance of reading)</td>
<td>(avoidance of reading)</td>
<td>(‘read’ pictures)</td>
<td>(follow inclination/preference)</td>
<td>(follow preferences and avoid dislikes, indifference for school, aggressiveness, withdrawal, neglect)</td>
<td>(acceptance of peer’s negative behavior)</td>
<td>1ALT (inform about dyslexia)</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1AVOID</td>
<td>1AVOID</td>
<td>1AVOID</td>
<td>2ALT</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td>2EM/COG</td>
<td>1SURV (acceptance, withdrawal)</td>
<td>-</td>
<td>12EM/COG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(quit specialised work)</td>
<td>(avoidance of writing tasks)</td>
<td>(avoidance of reading)</td>
<td>(she picks her own books/inf/tasks, oral learning, uses power relations, sit at the 1st desk, symbols, pictures)</td>
<td>(follow preferences and avoid dislikes, indifference for school, aggressiveness, withdrawal, neglect)</td>
<td>(acceptance of peer’s negative behavior)</td>
<td>(acceptance, withdrawal)</td>
<td>1SURV (acceptance of peer’s negative behavior)</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2ALT</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td>2EM/COG</td>
<td>1SURV (acceptance, withdrawal)</td>
<td>-</td>
<td>12EM/COG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(symbolic writing, pictures)</td>
<td>(follow preferences and avoid dislikes, indifference for school, aggressiveness, withdrawal, neglect)</td>
<td>(acceptance of peer’s negative behavior)</td>
<td>(acceptance of peer’s negative behavior)</td>
<td>(acceptance of peer’s negative behavior)</td>
<td>(acceptance, withdrawal)</td>
<td>(acceptance of peer’s negative behavior)</td>
<td>1SURV (acceptance of peer’s negative behavior)</td>
<td>1EM/COG</td>
<td>1EM/COG</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1AVOID</td>
<td>1AVOID</td>
<td>1AVOID</td>
<td>1AVOID</td>
<td>1AVOID</td>
<td>1AVOID</td>
<td>1AVOID avoidance of reading, destruction activities, no participation in class, no studying, truancy</td>
<td>1AVOID</td>
<td>(quit specialised work)</td>
<td>1AVOID</td>
<td>1AVOID</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- 1MED: Medical
- 1AVOID: Avoidance
- 2MED: Medical
- 1ALT: Alternative
- 1EM/COG: Emotional/ Cognitive
- 2EM/COG: Emotional/ Cognitive
- 1SURV: Supportive
- 2SURV: Supportive
- 1MAIN: Main
- 9MED: Medical
- 3AVOID: Avoidance
- 4ALT: Alternative
- 3SURV: Supportive
- 5EM/COG: Emotional/ Cognitive

**APPENDIX 17**

| Page 337 |
Latin numbers refer to different coping strategies, not frequency. Acronyms have the following meaning: MED = Medical coping strategies, MAIN = Mainstream coping strategies, AVOID = Avoidance coping strategies, ALT = Alternative coping strategies, SURV = Survival coping strategies (Coping strategies that attempt to change the meaning notion).

| Adulthood | 2DM/COG (acceptance of dyslexia, non-pathologising view) | 1AVOID (quit providing information about dyslexia) | 1MED (work with specialised methods) | 5ALT (symbolic writing, pictures, technological means, audio recording, pick from automatic internet search engines) | 2AVOID (avoidance of writing, writes half words) | 4EM/COG/SCH (decrease the impact/value of mistakes, focus on meaning instead of correct spelling, relaxed attitude, decrease of the importance of grades) | 15SURV (use of pc) | 1MED (use of special notebooks) | 2MAIN (double-check spelling, effort) | 1MED (medication) | 2ALT (music, library studying) | 1ALT (multisensory means) | 1MAIN (takes her time) | 3EM/COG/2C H (relaxed attitude and demystification of oral difficulties) | 4ALT (technological equipment, multisensory communication, library use, audio recording of lectures) | 2AVOID (avoidance of participation, avoidance of text) | - | - | 1MED (psychiatric support) | 1AVOID (avoids cinema and reading subtitles) | 1ALT (listens to dialogues) | 15ALT | 10EM/COG/SCH | 4MED | 5MAIN | 6AVOID | 15SURV |
Letter of Consent

Dear Participant,

My name is Theodosia Thoma and I am a second year PhD student at the University of Exeter. With the present letter, I would like to request your participation in my research which focuses on the coping strategies that individuals with dyslexia adopt in their daily activities. The research has the title “Coping with dyslexia” and will be conducted with the supervision of Dr. Phil Bayliss and Dr. Elias Avramidis.

More precisely, the present research aims to explore how Greek adults with official diagnosis of dyslexia deal with dyslexia in their daily routines (e.g. at work, studying or leisure time activities), investigate the factors that influence the process of coping and examine the coping strategies are considered by dyslexic individuals as “effective” within the framework of the modern mass-literate society. Despite the intense interest in the field of dyslexia, the study of coping strategies in relation to dyslexia is very limited both in the Greek and international literature. As a result the present study will attempt an in-depth exploration of the phenomenon with emphasis on the personal views of the participants. You will be asked to talk about your experiences, the characteristics with which dyslexia demonstrates in your case but mainly about the strategies that you have adopted to cope with the environmental expectations.

The present study does not attempt by any means to test or evaluate your professional life or your academic attainment. The purpose of the study is the advancement of knowledge in a relatively unexplored area and the production of fruitful outcomes both for the participants themselves and other individuals with similar demonstrations of dyslexia. It is also quite possible that the findings of the study will benefit younger persons with dyslexia (e.g. students) which are still thriving to deal with similar difficulties. Moreover, your reflections on coping strategies may be a useful source of information about the effectiveness of proposed interventions. Finally, the findings of present research may possibly contribute to the constitution of a –so far missing- legal framework or a code of practice, as well as to the establishment of structures of support for individuals with dyslexia within school, university and work environment.

The research has been already approved by the Ethics Committee of the Graduate School of Education which examined the methodological efficiency and issues of ethical consideration, so as to ensure the protection of the wellbeing and the rights of the participants.

Your participation is voluntary. Participation involves an approximately one-hour audio recorded interview and subsequent short meetings for clarifications and feedback on the analysis’ findings. The interviews will be conducted in place and time of your preference. During interviews you have the right to deny answer questions, pause or even stop the recording if you feel uncomfortable. Voluntary participation entails the
possibility of withdrawal of your participation for any/no reason at any stage of the research.

All the meetings and discussions will be held with privacy and all the information collected will be confidential. When all data will be collected, each individual will be given a pseudonym and real names will be deleted. Subsequent to interviews you have the right to access, change, correct or withdraw altogether your personal information. Data will be stored in a digital key cabinet to which only the researcher will have access and will be destroyed after the completion of the study. No third party will have access to you personal data with exception of the researcher’s supervisors.

The gathered information will be used only for the purposes of the present study. The findings will be included in a thesis for the nomination of a PhD degree on dyslexia and may be published in academic journals or presented in conferences.

If you decide to participate in the research, you need to keep the present informational document for future reference. At the end you will find a consent form which you should sign and return to the researcher.

Your participation to this study would be greatly appreciate it. If you have any inquiries before deciding your participation, please do not hesitate to contact me either electronically or by phone.

Many thanks for your time,
Theodosia Thoma

PhD student at the University of Exeter
Graduate School of Education
Email: tt217@exeter.ac.k
Tel. number: 6976285430 / 00447896317399
CONSENT FORM

I have been fully informed about the aims and purposes of the project. I understand that:

there is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation

I have the right to refuse permission for the publication of any information about me

any information which I give will be used solely for the purposes of this research project, which may include publications

If applicable, the information, which I give, may be shared between any of the other researcher(s) participating in this project in an anonymised form

all information I give will be treated as confidential

the researcher(s) will make every effort to preserve my anonymity

........................................
(Signature of participant)

........................................
(Date)

........................................
(Printed name of participant)

One copy of this form will be kept by the participant; a second copy will be kept by the researcher(s)

If you have any concerns about the project that you would like to discuss, please contact:

tt217@exeter.ac.uk OR 0030 6976285430 / 0044 7896317399

Data Protection Act: The University of Exeter is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University’s registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.